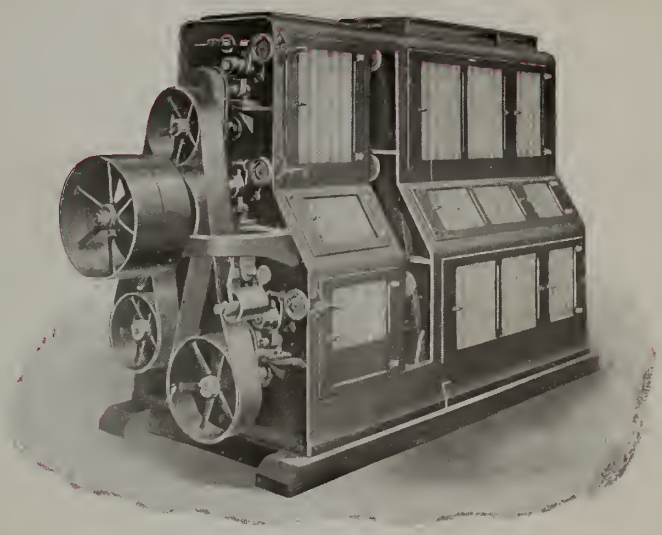
CANADIAN
Milling & Grain
JOURNAL

VOL. III MONTREAL, FEBRUARY 1st, 1922 No. 1

THE YELLOW BOOK

FIRST BREAK FLOUR



Do you know that the finest flour made is on the first break rolls of the MIDGET MARVEL MILL? The MIDGET MARVEL system makes a large percentage of flour on the first break.

The system is planned to separate all stock as it leaves each roll. As soon as flour is made, it goes to the flour bin. It is taken off at each opportunity. This is the reason why we get no attrition flour on the MIDGET MARVEL MILL. It is also the reason we mill with one half the power generally required.

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MAKERS OF

MANITOBA SPRING WHEAT FLOUR

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CAPACITY 13,700 BARRELS DAILY

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TORONTO, OTTAWA, LONDON, ST. JOHN, FORT WILLIAM, CALGARY, EDMONTON, VANCOUVER

CABLE ADDRESS:—"HASTINGS," MONTREAL. CODES:—A. B. C. 4th & 5th EDITIONS, 1901, RIVERSIDE

112 RECEIVING ELEVATORS IN MANITOBA, SASKATCHEWAN AND ALBERTA, CAPACITY 3,500,000 BUSHELS.
TERMINAL ELEVATORS AT MILLS, CAPACITY 1,500,000 BUSHELS

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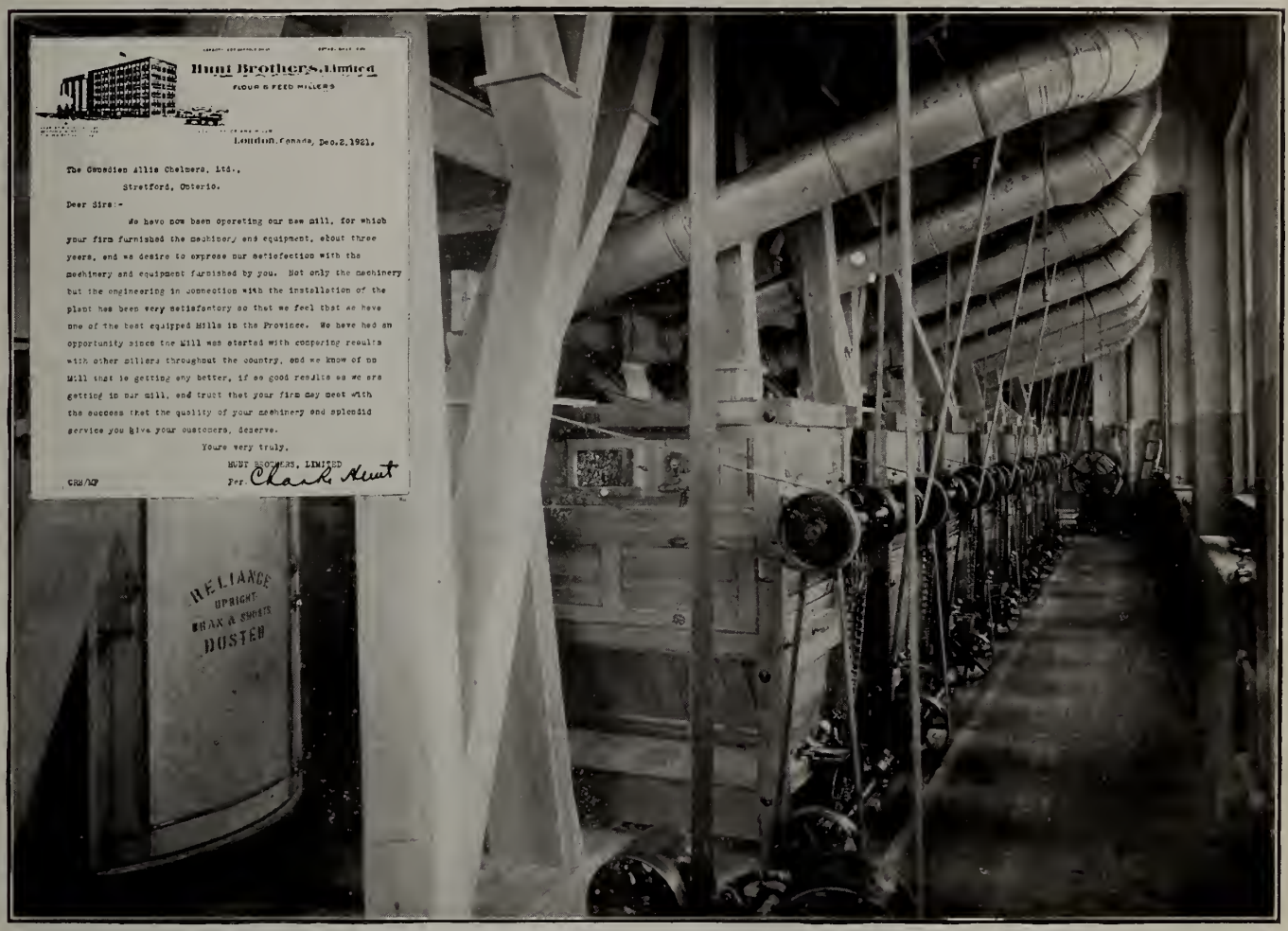
TANCREDE BIENVENU

Read Hunt Bros. letter regarding their Mill after three years continuous operation.


Hunt Brothers, Limited
FLOUR & FEED MILLERS
London, Canada, Dec. 2, 1921.
The Canadian Allis Chalmers, Ltd.,
Stratford, Ontario.
Dear Sirs:-
We have now been operating our new mill, for which your firm furnished the machinery and equipment, about three years, and we desire to express our satisfaction with the machinery and equipment furnished by you. Not only the machinery but the engineering in connection with the installation of the plant has been very satisfactory so that we feel that we have one of the best equipped Mills in the Province. We have had an opportunity since the Mill was started with comparing results with other millers throughout the country, and we know of no Mill that is getting any better, if as good results as we are getting in our mill, and trust that your firm may meet with the success that the quality of your machinery and splendid service you give your customers, deserve.
Yours very truly,
HUNT BROTHERS, LIMITED
Per Chas. Hunt
CRH/MF
RELIANCE
UPRIGHT
SHAKE SHIFTS
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PURIFIER FLOOR IN HUNT BROS.' 1,200 BBL. MILL AT LONDON, ONT.

MAY WE HAVE THE PLEASURE OF INFORMING YOU OF THE SUCCESS THAT OTHER MILLERS ARE HAVING WITH OUR :: :: EQUIPMENT :: ::

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A high quality bread flour sold in bags of 7, 14, 24, 49 and 98 lbs. and in barrels of 98 and 196 lbs.

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Capacity 1200 barrels daily

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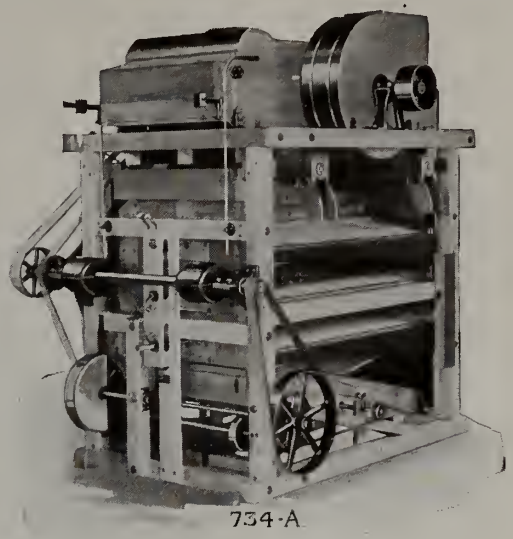

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He watches the oats rolling off the end of the screens—

The brush cleaners operating constantly without trouble—

The splendid separations being made by the air; splendid because there is no good wheat being wasted and no flour spoiling refuse going with the wheat—

The short sticks and straws that the machine is taking out—

The quiet steadiness of the machine in motion—

If It Is A Monitor Milling Separator

then he is content for he realizes that here is a machine which is producing real results. He knows what it is doing to his flour.

Life is too short to pass by the good things of life—a **MONITOR** Milling Separator is one of the good things of milling life.

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100 Interior Elevators Throughout Canada's Famous Wheat Belt

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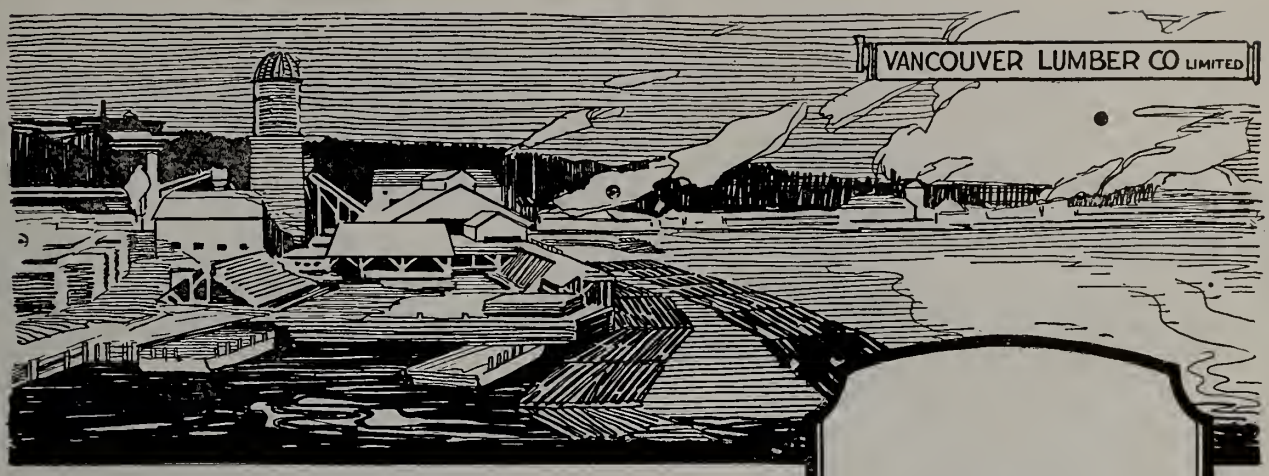

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THE value of Imperial Lubricants is best measured by the results they give. Bigger output, steadier and longer service from machinery, lower operating expense—all are made possible by their regular use.

In the accompanying list there is a right grade of oil for any make of machine and every moving part. All grades are of the same high quality. Carefully formulated to give dollar-for-dollar lubrication.

The success of countless Canadian industries is closely tied up with Imperial Lubricants. These testimonials from representative firms speak for themselves.

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We have been using Imperial Lubricants for several years. We are entirely satisfied with their quality, and the service could not be improved upon.
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For Manufacturing, Mining and Milling

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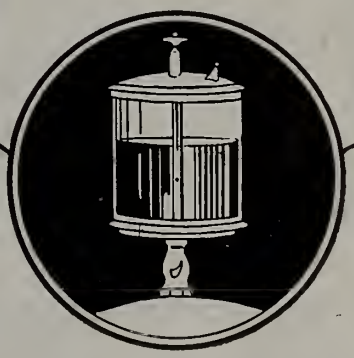

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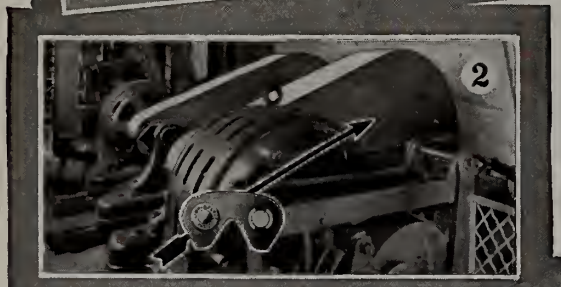
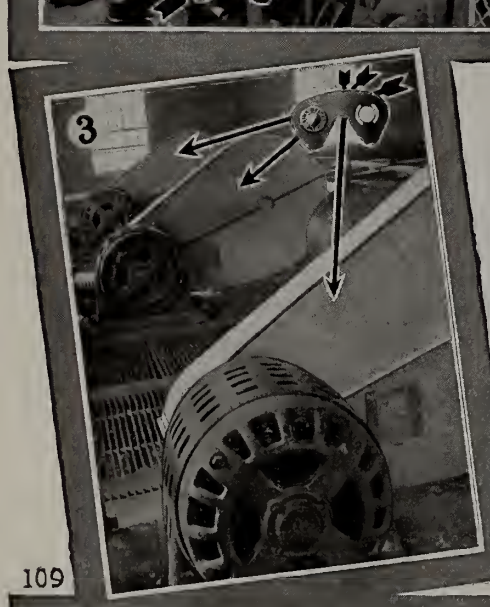
In The Public Grain Elevator, Port of New Orleans



THE Port of New Orleans Elevator has selected Link-Belt Silent Chain as the standard drive for the recent addition made to their elevator.

In the original installation, made in 1916, 33 drives totalling 1805 H. P. were installed. To date, 50 drives, 2645 H. P. are in use.

This is but one instance in many, where Link-Belt Silent Chain has been used continuously year after year as the standard means of power transmission in grain elevators and mills. The use of one Link-Belt Chain Drive usually leads to its adoption *as the standara drive.*



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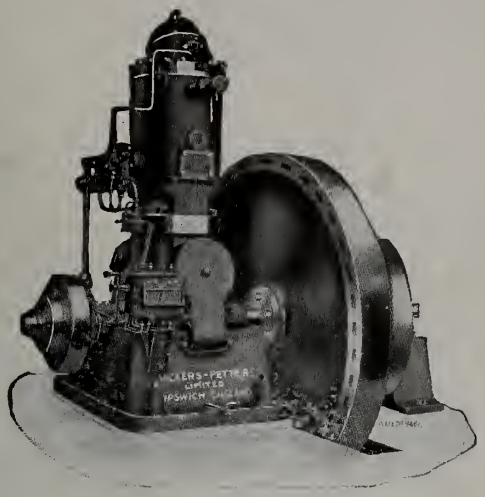
LINK-BELT
SILENT CHAIN DRIVES

Vickers-Petter Oil Engines

(PETTERS' PATENTS.)



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MESSRS. R. BOBY LIMITED

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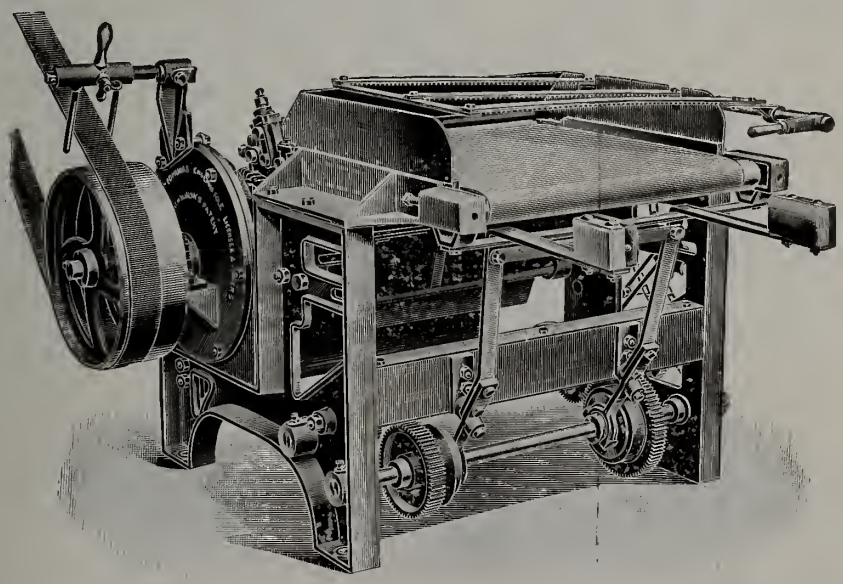

General view of the Robert Boby, Ltd., new patent flax scutching machine.

SCUTCHING

Can now be carried out by unskilled labor with

BOBY'S NEW PATENT SCUTCHING MACHINE

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CANADIAN Milling & Grain JOURNAL

Montreal:
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Phillips Square
Tel. Plateau 1983

Winnipeg: Toronto:

Published on the 1st and 15th of each month.
Devoted to Milling, Grain and Allied Interests.

E. J. HOLLIDAY, *Publisher.*
HAROLD P. FEENEY, *Editor.*

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One year, anywhere; in advance..... $3.00

Authorized by the Postmaster General for Canada for transmission as second class matter.

ADVERTISEMENTS
Rates on application. Advertisements and contributions to news columns should reach Montreal office not later than 8th and 22nd of each month to insure insertion.

VOL. III MONTREAL, FEBRUARY 1ST, 1922. No. 1

CANADA'S ONLY MILLING AND GRAIN PAPER

OUR SECOND ANNIVERSARY.

With this issue Canadian Milling & Grain Journal passes with a sense of labor conscientiously performed in the past, and with high hopes for the future, into its third year in the service of the milling and grain handling industries and their important allied trades.

When Canadian Milling & Grain Journal entered its exclusive field two years ago its appearance was warmly welcomed by millers and grain handlers from one end of the country to the other. They felt, and rightly so, that the time was opportune for the representation of their interests in the trade paper field, and they realized when Canadian Milling & Grain Journal had been appearing regularly for six months that in it they had a doughty champion of those interests. That their belief in the value, the usefulness and the indispensability of Canadian Milling & Grain Journal is still strong and growing more widespread is evidenced by the increasing measure of support which the publication is receiving.

To reiterate its policy, Canadian Milling & Grain Journal aims to assist by every means at its disposal the development of Canada's flour export trade, for it realizes that only by the establishment and the maintenance of such a trade can the Canadian flour milling industry thrive and prosper. Canadian Milling & Grain Journal will oppose in the future as it has in the past any attempts to put into effect legislation detrimental to the natural functioning or development of the milling industry, and it will at all times be ready to add its growing influence for good to the efforts of those working for the advancement of the milling industry.

For the grain handling interests Canadian Milling & Grain Journal desires nothing better than that they shall be left free to work out their business salvation without government or other interference. There has hardly been an issue of Canadian Milling & Grain Journal during the past twelve months, and before for that matter, which has not carried editorials fearlessly attacking plans contemplating the return of control or the destruction of the country's grain exchange system. These criticisms the Journal will continue to voice just so long as there is in evidence a desire on the part of those who do not know any better to wreck the existing grain handling system which, while it may always have room for improvements to meet ever changing conditions, represents basically the best brains of many generations of grain handlers.

As during 1921 Canadian Milling & Grain Journal intends to keep pace with the times in its editorial, news, technical and other departments; to be a practical help to its ever growing family of advertisers and readers, permitting its efforts to be guided by its keen desire to assist towards the development of national ideas that shall be distinctively Canadian.

The Year's Work Summarized.

For the information of those who have not yet become regular subscribers to the only business journal in Canada devoted to the milling, grain and allied industries, it may be stated that Vol. II. of Canadian Milling & Grain Journal comprises twenty-four regular numbers with a total of nearly 900 pages. There are approximately fifty pages of editorials on topics of live interest to millers, grain handlers, elevator builders and operators, and transportation men, as well as on a variety of subjects of national importance as well.

Our 2nd volume also includes upwards of fifty pages of practical articles and interesting news for elevator operators, while there are upwards of 150 pages devoted to the practical miller, this department including many new ideas and short cuts for the man who himself owns and runs his mill. In this department alone there are approximately one hundred and twenty illustrations while half tone cuts of prominent millers, elevator men, grain handlers and grain exchange men with reproductions of mills and milling equipment, diagrams and sketches bring the total illustrations in Volume II up to nearly three hundred.

The market news both domestic and foreign which is a feature of every issue has been the subject of many unsolicited compliments from those desiring to keep a permanent record of home and world conditions. In response to many requests a special table showing daily highest levels recorded for all kinds of grain on the Chicago Board of Trade was added to the regular market news in 1921, and will continue to be a feature of the Journal.

When to the above summary of contents is added some hundreds of pages of bright readable news items from every quarter of the globe the value of a year's subscription to Canadian Milling & Grain Journal which is only three dollars, is apparent.

Industry and its Relation to Thrift.

AFTER the period of price inflation and the somewhat reckless expenditures of the last few years, it is not altogether easy to become adjusted to present conditions. One of the things that is always needed under all conditions and which is absolutely essential at this time is the practice of thrift.

Thrift means industry. The man who daily uses his time, strength and energy for productive purposes is thrifty. Laziness and slothfulness are the opposites of thrift.

Thrift does not mean avarice, hoarding or miserliness, clinging to every penny tenaciously for the mere sake of possession or for lack of judgment and courage to use funds as they should be used.

Thrift often means the spending of money, and economy might well be defined as wise expenditure. A broken or worn out machine or some lack of adjustment, may cause a loss of many times the cost of replacement or repairs; also it may be wise to use money for expansion and development of the business.

The miller who applies himself industriously to his chosen vocation and uses a fair degree of native intelligence will eventually and in the natural course of events accumulate a sufficient share of worldly goods to take care of old age or the proverbial "rainy day."

The practice of thrift does not preclude generosity. Money is valuable only in so far as it brings health and happiness and makes the world a better place to live in. To be thrifty, one may be generous but not wasteful.

Be thrifty and prosper.

When a Miller Takes Chances.

The miller who continues to send out quotations on mill products and is not sure of his yield or cost of production is taking a long chance against loss at the end of the year unless feed is being sold for a higher price than wheat is costing and flour very much higher.

A yearly record of every item bought and sold with a complete expense account, is the best way to be absolutely sure of a profit. No guess work is permissible on figuring yield and cost of production and just here is where many mills fail to make good.

There are some millers who figure overhead cost on a barrel of flour by the daily capacity of the mill which is not the correct way of figuring it. Cost per barrel can be figured only on actual amount of barrels taken off the packer.

Getting every cent possible out of the feed and low grade flour makes quite a difference in actual profits at the end of the year.

Another item of expense which is the most vital of all and yet is often overlooked is power cost per barrel. There are mills consuming double the amount of power they should be utilizing, due to unnecessary machinery, shafting and inefficiency in every department. There are mills running as many as six large cleaners which require an enormous amount of power. This waste would be altogether unnecessary if the arrangements were made by some one who understood the importance of simplicity, durability and milling efficiency which are so necessary in making a mill pay.

Know the yield absolutely; know the cost of a barrel of flour to the most minute detail; make the very best products it is possible for you to make; and sell them right along beside the highest sellers; and, if there are no bad accounts to eat up the profits, there will be small fear of the mill not showing a good profit at the end of the year.

Lack of Knowledge, Cause of Criticism.

A GREAT deal of the agitation against grain exchanges is due to the ignorance of the grain growing interests concerning the system of handling grain. Perhaps the system has defects as viewed from the grain grower's standpoint, but until the producer makes a study of the system and learns for himself just what these defects are he should not add his influence towards tearing it down merely because agitators with an axe to grind have his ear.

Many of the agitators have no real knowledge of the market system and it is because the grain growers lack comprehensive knowledge of it that they make headway in their efforts to create lucrative positions for themselves in the grain trade. Naturally they will use the utmost endeavor to reach the goal of their desires and knowing that the grain grower does not know what he should know of markets and marketing systems he makes many misleading statements that are never questioned and often make a deep impression on his hearers.

In a sense the grain exchanges are partially responsible for present developments because they allowed to go unchallenged many foolish and malicious statements regarding them. In a way they can be excused for their apparent lack of defense because they relied too much on the common sense of the grain grower and did not realize his susceptibility to illogical argument.

Few people outside of the grain trade have first class knowledge of the system. Men living on the fringe of market life are as ignorant or even more ignorant of the system than the majority of the grain growers are, yet the system is fairly simple. There is just as much ignorance concerning the banking system. Many a man has passed in and out of the doors of a bank daily for years, leaving money on deposit, and still could not run a bank successfully because he lacks knowledge of the system. He accepts the bank as a part of business life and should his own particular business fail to make profits he does not enlist in the ranks of Bolsheviks and go about the country tearing down banks.

Think this matter over. Are you actually making profits, Mr. Miller, or are you fooling yourself? Take out your pencil, figure your percentage of "overhead" and your percentage of "gross profits" and see if your gross profits are in excess of your overhead percentage. If not, you are losing money. It will pay every feed dealer and miller in Canada to look into this subject thoroughly and then use the knowledge so secured to place his business on as sound and as loss-proof a basis as possible.

EASTERN PROVINCES
MONTREAL
Dubrule Building
Phillips Square
Tel. Plateau 1983

MONTREAL FEBRUARY 1ST, 1922

THE MONTREAL MARKETS

Flour.—There has been no further business reported in spring wheat grades of flour for export account, nor has there been any notable improvement in the local or country demand for supplies, consequently the market on the whole has been quiet. Prices remain unchanged with sales of car lots of first patents being recorded at $7.50, second patents at $7, and strong bakers at $6.80 per barrel in jute bags, ex-track, less 10c per barrel for spot cash.

The trade in winter wheat flour is slow, the demand being only for odd small lots, but as the offerings on spot have not been large a steady feeling has prevailed in the market with car lots of choice grades selling at $5.75 to $6 per barrel in second-hand jute bags, ex-track, while smaller quantities have been sold at $6.50 to $6.75 per barrel ex-store, and winter wheat patents at $7 to $7.25 per barrel ex-store in new cotton bags. The demand for white corn flour has been slow at $4.50 to $4.60 per barrel in jute bags, delivered.

Millfeed.—There has been no change in the condition of the market for millfeed, but the feeling of late has been very firm owing to the continued good enquiry and small offerings. Straight car lots of Manitoba bran and shorts are being sold at $32.50 to $35 per ton, including bags, ex-track, and small quantities in mixed car orders at $28.25 for the former, and at $30.25 for the latter, with middlings at $32.25 per ton, including bags, less 25c per ton for spot cash. The demand for pure barley meal is somewhat limited at $38 to $40, pure grain moullie at $38, and feed cornmeal at $35 per ton, including bags, delivered. A steady trade is reported in standard grades of rolled oats at $2.85 to $2.95 per bag of 90 lbs.

Baled Hay.—There has been a better demand for baled hay, and especially so from outside sources, which has resulted in a fair amount of business being done at steady prices. Sales of car lots of good No. 2 timothy are being made at $27 to $28. No. 3 timothy hay at $24 to $25, and clover and clover mixed hay at $22 to $23 per ton, ex-track.

Grain.—There has been an improved demand from millers for cash wheat in the Winnipeg market of late which resulted in recent sales of a few 10,000 bushel lots of No. 1 northern at 3c per bushel over the May option. This representing an advance of 1c per bushel. There has also been some demand from exporters for wheat and some business has been worked for the opening of navigation at existing premiums with a 5c per bushel carrying charge.

The trade in Manitoba wheat at Montreal for export account has been again dull owing to the fact that there has been no improvement in the demand from foreign buyers, but there has been a good enquiry from them for coarse grains, and, as they are steadily increasing their bids for such 1½d to 3d per quarter daily, sales of odd loads continue to be made for February shipment. Quite a few orders were received for oats and barley for last half January shipment at prices that were workable, but on account of there being no ocean grain room available for that position they could not be accepted. Recent advices by wire from New York report some business in corn and oats for export.

CORN EXCHANGE ELECTS OFFICERS.

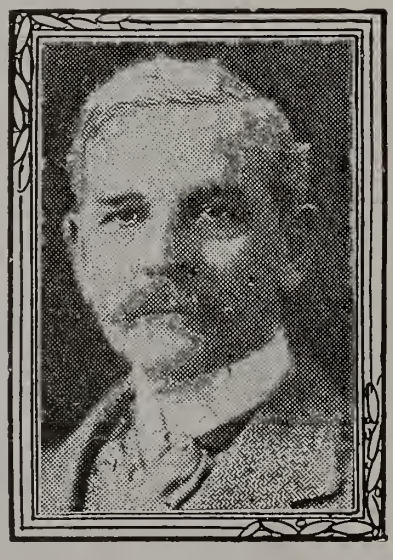
Montreal.—At the annual meeting of the Montreal Corn Exchange Association, held recently at the Board of Trade, Mr. Howard Strachan was declared elected president by acclamation, with Mr. T. H. Reeves as treasurer, also by acclamation.

The following officers were elected:—Committee of Management, Messrs. F. A. Heywood, J. A. Marshall, A. George Burton, E. Turgeon, W. J. McAuley, Norman C. Stuart, and E. E. Clare.

Board of Review:—Chairman, Mr. James Carruthers, Messrs. H. D. Dwyer, H. W. Raphael, A. P. Stuart, Adam G. Thomson and Norman Wight.

Transportation Committee:—Messrs. W. B. Bashaw, A. E. Clarke, J. A. Marshall and J. B. Trempe.

There was a fair attendance at the meeting, the chair being occupied by the retiring president, Mr. William McDonald, who, on behalf of the Committee of Management submitted the annual report of business transacted during the year, most of which was in connection with transportation matters. Mr. McDonald was supported as the nominee of the Corn Exchange for election to the Council of the Board of Trade.



W. A. BLACK
Vice-President and Managing Director of the Ogilvie Flour Mills Co., Ltd., Montreal, recently elected Vice-President of the Molson's Bank.

Saskatoon.—Dr. Seager Wheeler, wheat wizard of Rosthern, speaking here recently, intimated that he is working on a new type of wheat, free from rust affection. Dr. Wheeler gave an interesting account of how he creates new seed by hand-rubbing and hand-picking selected heads of grain.

NEW MILLING IN TRANSIT CHARGE APPROVED BY RAILWAY COMMISSION.

Montreal.—Word was recently received by Mr. J. K. Smith, Manager of the Transportation Bureau of the Board of Trade, from the Board of Railway Commissioners that an order had been issued providing that a charge of one cent per hundred pounds for a stop-over charge, or milling in transit, had been issued by the Railway Commission. This is the upshot of considerable pleadings and hearings before the Railway Commission, extending from Montreal to the Pacific Coast, and the reduction in the charge for stop-over privileges will be greeted with much pleasure, especially by the Montreal grain men, whose business had been considerably hit by the previous higher charges.

Has Been Wanted for Years

"This order," said Mr. Smith, "will be received with considerable gratification by the grain interests in Montreal, as it concedes the very point for which they have been contending for years.

"It means that in future shippers will be able to have their grain milled in transit at any milling point at a uniform charge of one cent per hundred pounds for the delay, and also means that the soft Ontario wheat will be entitled to the same privilege. It further means that the Montreal grain interests, probably the greatest in the Dominion, since most of the grain of the Canadian West is exported through Montreal, will not in future be penalized by freight rates. The new rule applies to grain for domestic consumption, regulations regarding grain for export remaining as before."

Over Year's Hearings

The order of the Railway Commission was issued on application of the Winnipeg Board of Trade, Western Canada Flour Mills, the National Millers' Association, the Montreal Board of Trade, and other leading trade organizations throughout the Dominion. These representations have continued for over a year, and have entailed hearings at many points throughout the country, and much expense has been entailed in presenting the matter before the Railway Board, so that the grain men are well satisfied that they have finally won their point.

AUSTRALIA TO AID EUROPE.

Melbourne.—Aid to the extent of $250,000 in Australian supplies, principally wheat, to be shipped from Australian stores already in Great Britain, is to be extended to the starving people of Europe by the Commonwealth Government.

TRADE OPPORTUNITIES

With a view to assisting the Canadian milling trade in the development of a permanent and profitable export business, "Canadian Milling & Grain Journal" publishes in each issue a selected list of trade opportunities, the investigation of which should prove of value. "Canadian Milling & Grain Journal" is taking special pains to ascertain the reliability of each opportunity presented and will gladly furnish any further information regarding them that may be desired.
THE EDITOR.

No. 218.—Mr. D. Kenton, Apartade, P.O. 1627, Havana, Cuba, would like to establish Canadian connections with exporters of hay, oats and flour. Has at present representative in Canada who would be glad to call on prospective customers. References given.

No. 219.—Mr. F. Green, 67 Hope St., Glasgow, who is engaged in the flour importing business, wishes to get in touch with a Canadian flour mill for business as exclusive buyer, and | or agent for Scotland.

No. 220.—Messrs. McConnell & Reid, 19 Waterloo St., Glasgow, are open to receive quotations on Canadian winter wheat flour and Manitoba clears.

No. 221.—Messrs. Bruce & Wilson, 70 Wellington St., Glasgow, are open to correspond with a Canadian flour mill not already represented in Scotland and Ireland, with a view to business as buyers.

No. 222.—Mr. Geo. M. Thompson, 8 Wellington St., Glasgow, Scotland, importer of spring and winter wheat flour is open to represent a Canadian mill in Scotland.

No. 223.—The West Indian Sales Co., Port au Spain, Trinidad, which have excellent facilities for handling flour, desire to obtain a Canadian agency for same.

No. 224.—Messrs. Laurie & Morewood, 15 Seething Lane, London, E.C. 3, England, who are buyers of oatmeal and rolled oats invite offers, c.i.f. United Kingdom ports, from Canadian shippers of these commodities. They are also prepared to handle consignments.

No. 225.—Messrs. McDonnell & Co., 13 North Alley, Fenchurch St., London, E.C. 3, England, are open to purchase consignments of Canadian buckwheat flour in cartons, and invite offers from Canadian firms in a position to export.

THE CHICAGO MARKETS

The following table compiled from figures furnished by Messrs. Bryant, Isard & Co., members of the Toronto Stock Exchange and the Chicago Board of Trade, 84-90 St. Francois Xavier Street, Montreal, show highest price levels recorded on Chicago Board of Trade, from Jan. 11 to Jan. 26.

	Jan. 11	Jan. 12	Jan. 13	Jan. 14	Jan. 16	Jan. 17	Jan. 18	Jan. 19	Jan. 20	Jan. 21	Jan. 23	Jan. 24	Jan. 25	Jan. 26
May Wheat	1.10⅞	1.12¼	1.12⅜	1.11⅞	1.11¾	1.12¼	1.13	1.14⅝	1.14⅞	1.16¼	1.17½	1.17¼	1.16¼	1.15⅝
July Wheat	1.00	1.00¼	1.01⅛	1.00½	1.00⅜	1.00⅝	1.01¼	1.02¾	1.02⅞	1.03	1.03⅞	1.03⅜	1.02⅝	1.02⅜
May Corn	0.53½	0.53⅞	0.53⅜	0.53⅛	0.53	0.53⅛	0.53⅜	0.53¾	0.53¾	0.53⅝	0.54	0.54⅜	0.53⅞	0.53⅝
July Corn	0.54⅞	0.55¼	0.54⅞	0.54½	0.54⅜	0.54¾	0.55	0.55½	0.55½	0.55⅜	0.55¾	0.56	0.55⅝	0.55⅜
May Oats	0.38½	0.38⅞	0.38½	0.38⅜	0.38⅜	0.38¼	0.38⅝	0.38⅞	0.39¼	0.39¼	0.39¼	0.39⅝	0.39⅜	0.39
July Oats	0.39⅛	0.39½	0.39⅛	0.39⅛	0.38⅞	0.39⅜	0.39½	0.39⅞	0.39⅞	0.40	0.40⅜	0.40⅜	0.40	0.39¾
May Rye	0.83¼	0.84	0.84	0.74	0.83⅛	0.83½	0.84⅛	0.83⅞	0.86¾	0.87⅛	0.87⅛	0.87¼	0.85⅞	0.85¼
July Rye	0.76	0.75	0.76½	0.76⅛	0.76⅛	0.76½	0.76¾	0.78¾	0.78¼	0.79½	0.80	0.79½	0.79	0.79½
May Barley	0.57⅜	0.57½	0.58	0.58⅛	0.58¼	0.58	0.57	0.58	0.58½	0.60	0.60	0.60	0.59	0.58⅞

ONTARIO

TORONTO

TORONTO FEBRUARY 1ST, 1922

THE TORONTO MARKETS

Flour.—The demand for flour is still light. Export business has recovered a little recently, but the advance in prices put more or less of a check on the market and importers declined to follow the advance. A little more Ontario flour is offering as wheat is coming on a little more freely, although prices are so high that dealers can do very little with it for export. Milling wheat in Ontario is actually selling higher than No. 3 Northern, which means that Ontario flour is too high to do business. The difference that generally exists between Manitoba and Ontario flour has disappeared. Ontario wheat has been dropped to a considerable extent and Manitoba has taken its place. Sales are being made for export at 39 shillings, and 40 shillings have been asked since the advance in the market. Domestically, top and second patents are bringing $7.40 and $6.90, respectively.

Rolled Oats.—There has been little improvement in the rolled oats market although now that the cold weather appears to have set in in Ontario, following a period of very mild weather, the demand is expected to pick up. The prevailing quotations range from $2.65 to $2.85 per 90-lb. bag.

Corn.—There is a big demand for corn and the market remains firm with very few fluctuations, and with some tendency towards further strengthening. According to Mr. T. F. Harcourt, Royal Bank Building, the prevailing quotations are from 67 cents to 74 cents, Montreal freight, Canadian funds, and depending on the grade. Corn is finding a ready market for domestic consumption.

Oil Meal.—There is a fair demand for oil meal although not a great deal of business is passing. The price of oil meal, f.o.b. Toronto, Canadian funds, is from $52 to $54. The Buffalo price runs from $46 to $47.50.

Grain.—Deliveries of Ontario grains of all kinds are very light at present, this being partly due to the light crop in many districts last summer. It is also believed that farmers are finding it more profitable to feed their grains to their live stock, for which a fair market exists, than to take it to the elevators. Most of the wheat which is coming in is of poor grade, being for the most part sprouted or shrunken. Even at the price which is now asked, Ontario wheat is relatively higher than for Manitoba. The scarcity of the grain is the reason for the firmness in price, as there is always a demand, although limited, for soft wheat for making pastry flour. There is a definitely strong trend in wheat. A few days ago the market saw a gain owing to renewal of export business and prices have been well maintained, owing to the policy of holding wheat in both Canada and the United States. Holders of Ontario wheat are still firm in their ideas regarding the market and are asking $1.15 to $1.20 outside. This is rather too high for export business unless the miller can secure what he wants at his door. Some demand comes for local consumption for soft flour, but prices well above the export basis are being paid. Because of the scarcity of Ontario milling wheat, and the relative cheapness of Western wheat, Ontario millers have been taking the hard variety. It is stated that the plan to allow one freight rate to cover the movement of grain from the Western Provinces to the East, milling in transit and final delivery at seaboard, will prove a help to Eastern millers.

Millfeeds.—While the export flour situation is showing some slight signs of revival there has not been sufficient volume of business yet to affect the millfeed situation. The keen demand for bran continues and is likely to keep up till grass, which is the only real substitute, is available. Premiums are still being offered of $2 and $3 a ton on split cars of bran and shorts although these premiums do not obtain to the same degree on shorts as on bran. A fair volume of mixed car business is moving, but the trade reports that collections are rather slow. Bran is quoted at $28.00; shorts at $30.00; White mids at $35.00 to $36.00, and feed flour at $1.90 per bag.

CANADIAN WHEAT AND FLOUR EXPORTS TO U. S. CUT IN HALF BY NEW TARIFF.

Ottawa.—The new United States tariff has effected a big drop in exports of Canadian wheat and wheat flour to the United States, and this is made evident in official figures as compiled by the Dominion Bureau of Statistics. The export of Canadian wheat to the United States during November was reduced to 50 per cent from November, 1920, and in the quarter ended with November the decline amounted to close on 70 per cent.

This is a serious situation for Canada and means that flour exports must be increased. It means, in the opinion of close observers, that Canada will have to make a strenuous effort to develop foreign markets, as they will have to extend into new territories and carry on a great deal of "missionary" work in the development of these territories.

Total exports of Canadian wheat during the month of November were 29,254,036 bushels, valued at $31,834,534, as compared with 26,133,769 bushels, valued at $61,454,014 in November of 1920. Of the total exports of wheat 4,156,500 bushels, valued at $4,521,067, went to the United States, as compared with 8,623,718 bushels, valued at $19,976,706 in November, 1920, a decrease of 50 per cent. Canadian wheat exports to the United Kingdom were 18,515,116 bushels, valued at $20,432,999, as compared with 2,535,046 bushels, valued at $6,116,934.

Of the wheat exports to the United Kingdom 15,525,723 bushels, valued at $15,648,428, went by way of the United States and 2,969,393 bushels, valued at $3,784,571, by way of Canadian ports. Canadian wheat exports to countries other than the United States and the United Kingdom were 6,592,411 bushels, valued at $6,880,468.

Flour Exports Down

Total exports of Canadian wheat flour in November were 855,957 barrels, valued at $5,597,354,

of which 100,967 barrels, valued at $654,953, went to the United States; 545,431 barrels, valued at $3,464,494, to the United Kingdom, and 209,599 barrels, valued at $1,477,907, to other countries. Exports of wheat flour to the United States were reduced by 50 per cent, the exports to the United States for November, 1920, being 338,185 barrels, valued at $3,872,644.

For three months ended November, Canadian exports of wheat flour to the United States were 147,513 barrels, valued at $979,433, as compared with 388,185 barrels, valued at $3,872,644 for the three months ended November, 1920, a decrease of more than 50 per cent. Exports of Canadian wheat flour to the United Kingdom for the three months ended November, 1921, were 1,210,123 barrels, valued at $8,187,251, and exports to countries other than the United States and the United Kingdom were 512,447 barrels, valued at $4,036,880, and total exports of flour to all other countries for the period being 1,876,083 barrels, valued at $13,204,144.

WINTER WHEAT CROPS IN GOOD SHAPE.

The winter wheat crop has entered the winter in good condition in Canada and some increase in acreage is reported. The total area estimated as sown to fall wheat for the season of 1922 is 842,400 acres, as compared with 792,200 acres sown last year and with 720,635 harvested acres. The area sown this fall represents an increase of 6 per cent over the area sown last year and of 17 per cent over the area harvested.

The condition of winter wheat in the United States continues good throughout the north central States, but continues to deteriorate in southern Nebraska and Kansas, due to the drought. The condition in Washington and Oregon has been benefited by recent rains and snow.

The fall sown cereal crops are entering the winter in fair condition throughout Central Europe, although the dry autumn has probably curtailed the acreage somewhat.

THE BRUSSELS COMMERCIAL FAIR.

Canadian flour manufacturers are invited to exhibit their products at the Third Official Commercial Fair of the Municipality of Brussels, which is to be held under the patronage of His Majesty King Albert of Belgium, from April 3 to April 19, next. Inquiries and applications for space should be addressed to the head office of the Fair, at No. 10 Grand Place, Brussels, or to any of the Belgian consuls in Canada. Buyers tickets will be furnished free on application.

The Modern Sophocles

This is a work-a-day world; there is a vast multitude of things to be done in it; so many that every last man and woman has his job, not his job for to-day only, but, within reason, for every day throughout the year. And if we run away from or play with or neglect our work, we are shirkers and slackers. And shirking and slacking destroy moral fibre in the most thorough-going and terrible ways.

Perhaps our day needs a little vigorous preaching as to the virtue and excellency of hard work. Hard work conscientiously done is good for a man's soul. Since the world began there has never been a strong-fibred soul developed within a man or woman who was not a hard worker. What they did was not the important matter so much as how they gave themselves up to it.

There is quite too much thought among us as to how we are to get out of work. Shorter hours of labor may be needed, but if, in our eagerness to get them, we breed any of the spirit of the shirker we are doing a very fatal thing. Hard work, given normal conditions and the right mind toward it, is not a hardship, and to create the impression that it is, is to do a very wrong and a very destructive thing.

SAY WESTERN M.P.'s FAVOR WHEAT BOARD.

Ottawa.—That there will be a demand for the reorganization of the Canada Wheat Board and also from other sources, for a continuation of the probe into wheat marketing conditions, during the coming season of Parliament, is expected by members of Parliament, who are now in the Capital, as well as by several who have been here recently. Western Liberals, it is understood, are strongly in favor of having a thorough investigation of wheat marketing conditions made, though whether this would mean a continuation of the present Royal Commission on wheat marketing is problematical. If the investigation is continued, whether by the present or by a reconstituted commission, it is thought that the Government's decision in the matter of reappointing a wheat board will depend largely upon what the investigation brings out. In any case, a resolution asking re-appointment of the Canada Wheat Board is expected to emanate from the Progressive group in the next House.

WE WANT YOU

To be listed in the Free Milling Directory of Canadian Flour Mills, managers, superintendents, head and second millers, and engineers.

IF YOU WANT TO BE INCLUDED

We must have your name and other particulars on accompanying form. Kindly fill in and return promptly.

Superintendent .....

Head Miller .....

Second Miller .....

Name of Firm .....

Address .....

Daily Capacity .....

Power Used .....

WESTERN PROVINCES

WINNIPEG

WINNIPEG FEBRUARY 1ST. 1922

THE WINNIPEG MARKETS

Flour.—Western mills report that trade is showing signs of becoming quiet. Domestic business, which was very good from the beginning of this season to the present time, has fallen off during the past two weeks, and millers are now closer to the end of their orders than at any previous time. However, millers are not worrying, they have had a fairly good season so far, and say the present is merely a mid-winter situation that had been looked for, especially with the export trade as it is. With the approach of spring, undoubtedly, the demand for flour will greatly increase, as stocks now held by jobbers and dealers will not take long to reach the almost vanishing point, as at no time has the buying been of a nature to lay in stocks, but practically only for immediate requirements.

Export trade is reported as extremely quiet, and with the exception of small lots of low grade stuff being worked via Vancouver for the Orient, there is but little doing, it is said. This business is welcomed by the millers as it allows them to reduce their stock of this grade which was accumulating uncomfortably.

There are numerous enquiries coming from the United States and overseas buyers, but present levels and conditions do not permit much exporting business to be done.

Flour prices continue steady, there having been no change for the past month. Present quotations are: Best patent spring wheat flour $7.30 bbl. in jute bags, second patents $6.70, first clears $6.10, delivered at any point from Fort William to the western boundary of Manitoba. Saskatchewan prices are 10 cents under these prices, and from eastern Alberta to the Pacific coast values rise progressively to $7.60 at Vancouver and like points, Vancouver Island $7.65 for best patents, and Prince Rupert $7.80.

Millfeed.—The demand for millfeed continues good and stocks on hand are not heavy at any point. There has been no advance in prices here as has taken place in eastern Canada, but they may be accorded a boost in the near future if the flour trade continues dull, necessitating shorter running time for mills and consequently decreased stocks of feeds. The large quantity of feeding grain in the West and the low prices in vogue, are working against higher prices for millfeeds. Bran continues to be offered at $19.00 per ton, in bags, and shorts at $21.00, in cars or mixed cars, delivered, f.o.b., Manitoba points.

Oatmeal. — The oatmeal trade continues quiet, and the demand is quite moderate for either rolled oats or oatmeal. This is rather surprising for this time of the year, and especially so when the cheapness of these commodities is considered. A slight reduction in prices from 15 to 25 cents took place this week for rolled oats, present quotations being $2.35 to $2.50, in 80-lb. bags, and oatmeal $3.00 to $3.25 per 98-lb. bags, delivered, Winnipeg territory.

Rye Products.—Generally speaking, the trade for rye products is dull and featureless and the market has shown little activity all winter. Small domestic demand reported but nothing doing in export trade. Prices remain unchanged, present quotations being: Best patent flour, $6.50 bbl., in 98 lb. bags; medium $5.30, dark $4.00, rye meal $4.00, delivered, Winnipeg territory.

THE GRAIN MARKETS.

Since the demoralization that marked the New Year, the markets have been making small but steady gains and are now as nearly back again at the points where the sudden decline occurred. Export business has been the feature of the past few days, and it is said that in the three days ending January 21st over six million bushels of wheat were bought in the Winnipeg market, part of which were hedges against contracts for all-rail shipments and part hedges being taken off against holdings of grain across the lakes. The undertone of the market has become appreciably lighter and more cheerful and the trade at Winnipeg are gradually getting over a bearish attitude.

There are other influences at work, besides immediate export business. The most important is the continuance of very adverse weather in the winter wheat belt in the southern States. In Texas, Kansas, and Oklahoma there are wide areas in which drought has greatly enfeebled the wheat, and unless rain or snow comes quickly the damage will be severe. It is beyond doubt that the crop is passing through winter in a more critical state than for many years if at all, before, and when spring opens up and these crops become a more active market factor, it is possible that we may see a crop scare of a sensational character.

Easier money, a better tone to the stock and bond markets, and rather more confidence in the general financial and business situation, are all matters that are helping the markets. The improvement in exchange and ocean freight rates keeps export bids into line with the market, and makes the short voyage from North America attractive.

In the coarse grains the fluctuations have mostly followed wheat, and the general tendency has been towards a better price level. The large visibles of corn and oats in the States and the hedges on them which are carried on the markets form a load that must be lifted before there is any permanent improvement from the low levels of feed grains.

Winnipeg cash markets have been firm, with fair buying by both mills and exporters, and premiums have been well maintained. Trading for the opening of navigation has begun on a basis of existing premiums and a carrying charge, indicating that buyers have confidence that a premium will be maintained throughout the winter season. Cash oats have been in excellent demand by Eastern interests, but there is a shortage of the best grades, 2 C. W.'s in particular being very scarce.

The index to one's character is loyalty. Business is built on confidence. Have confidence in yourself and make yourself fit. Be true to your firm and yourself always.

HOW TRANSPORTATION INTERESTS REGARD VANCOUVER GRAIN ROUTE.

Winnipeg. — Transportation administrators are very carefully scrutinizing the movement of grain via the port of Vancouver and the Panama canal to Europe. The route has not been favorably regarded, possibly for the very obvious reason of the more profitable haul eastward and the influence of allied interests of the old established channel. But rail and sail transportation managers frankly admit it is a problem in domestic economics.

If the westward route can perform the service as promptly and with even a slight decrease in cost over the route down the lakes they do not hesitate to say much of the grain will seek an outlet via Vancouver. Several million bushels went that way this year, ordered by New York, Montreal and Toronto shipping agencies. It is too early to analyze returns to determine the value of the experiment, but it is certain if the westward trade route is to prove popular that Vancouver must erect more storage elevators. In that event the Winnipeg grain exchange men assert all grain produced west of the Alberta east border will go via the Pacific. The balance they do not believe at this stage, can ever be exported more profitably than at present, via the lakes.

But Canada continues to pay heavy toll to alien interests on the lake route. For the crop year ending July 31, 1921, 312,875,393 bushels of grain was shipped eastward via the lakes and rail. Nearly one-half of this went via U. S. ports. For the year 1921, ending Dec. 31st, 161,261,488 bushels went down the lakes from Canadian ports. Canadian boats carried 138,881,956, but of this quantity 7,049,463 went in Canadian vessels to U. S. ports. American boats transported to U. S. ports Canadian grain to the amount of 91,598,910. No American boats carried grain to Canadian ports from Canadian ports since the coastwise laws, amended to permit this during the war, have been restored, but alien transportation companies divided nearly in one-half the profits from this purely domestic industry. Buffalo reaped the rich reward. That is an equation Canadian grain men have been long trying to eliminate but the buyers or their agencies determine the route of shipment which of course they calculate on cost.

In late years Canadian routes have been gradually reducing the quantity of this grain going via alien routes, but Yankee boats, elevators and trains continue to take nearly one-half of this business annually. Grain men say the through shipment via an improved canal system would solve this problem and perhaps the Vancouver route may help to some considerable extent.

CONVICTIONS UNDER CANADA GRAIN ACT TO GO BEFORE COURT OF APPEALS.

Winnipeg.—In the Provincial Police Court recently the Manitoba Grain Co., Ltd., was fined $25 and costs for an infringement of the Canada Grain Act. The charge was that of operating in the Province of Saskatchewan as commission merchants without a license. Some time ago a similar conviction was registered for operations in Manitoba.

At the time of the previous case it was freely stated that the case was a "test" one to try the validity of the Canada Grain Act, and it is significant that in both cases leave to appeal was granted. Possibly there may be a third case on the way in which operations in Alberta might form the offense. In that case it is presumed that the Appeal Courts would consider the matter on a broader basis than if only one province were mentioned.

WESTERN MILLER PRAISES RAILWAYS.

Winnipeg.—One of the largest shippers in the West, a flour miller ranking among the leaders in his industry, admits that railroad freight service is too good, altogether too good. Freight officials and carriers in the West can remember that it hasn't been so long when millers were complaining that they were losing business in the East because of the uncertainty of the freight movement. Now these same millers say the freight service is too good—so good that it is losing business for them.

"Flour buyers do not have to anticipate their requirements very far ahead," complains one miller. "Railroads are giving such good service that the average flour buyer can now calculate within a small amount just how much flour he has to carry. When railroads were delaying freight the flour buyer had to carry a 60 to 90-day stock, making for healthy conditions among mills."

If contracts for future delivery were to be limited in all cases to delivery of things already in possession of the contracting party, business would be hampered in a thousand ways. There is absolutely no reason why a wheat dealer or a flour dealer should not make a contract for the delivery of his commodity three or six months from date, knowing perfectly well that he can fulfil the contract by securing the necessary article. To call this ethically wrong is simply ridiculous.

THE WESTERN MARKETS

The following report furnished by Messrs. Baird and Botterell, 103 Grain Exchange, Winnipeg, shows daily highest price levels from Jan. 11 to Jan. 26 inclusive.

	Jan. 11	Jan. 12	Jan. 13	Jan. 14	Jan. 16	Jan. 17	Jan. 18	Jan. 19	Jan. 20	Jan. 21	Jan. 23	Jan. 24	Jan. 25	Jan. 26
May Wheat	1.08½	1.09⅛	1.09¾	1.09¾	1.10	1.10¾	1.11⅜	1.12⅛	1.12½	1.13½	1.14½	1.14½	1.13½	1.12⅞
July Wheat	1.06¼	1.06⅞	1.07½	1.07⅜	1.07⅝	1.07⅞	1.08⅞	1.09⅝	1.09⅞	1.10⅝	1.11⅝	1.11⅛	1.10¼	1.09⅝
May Flax	1.82	1.83¾	1.84⅞	1.84⅞	1.84¾	1.85	1.87	1.90¼	1.89¼	1.89½	1.90½	1.92¾	1.92¼	1.91⅜
May Rye	0.84⅜	1.84⅝	0.85	0.85½	0.84⅝	0.84⅝	0.85½	0.86¾	0.87¾	0.88½	0.89⅜	0.88½	0.86⅞	0.86⅞
May Barley	0.57¾	0.58⅞	0.58¾	0.58⅞	0.58¾	0.58⅞	0.58¾	0.58⅞	0.58¾	0.58¾	0.58¾	0.58⅞	0.58⅝	0.58¾
May Oats	0.44¾	0.45⅛	0.44⅞	0.44¾	0.44¾	0.44⅞	0.44⅞	0.45⅛	0.45⅛	0.45⅛	0.45⅜	0.45⅜	0.45¼	0.45⅜
July Oats	0.44⅜	0.44¾	0.44½	0.44⅜	0.44⅛	0.44½	0.44⅝	0.44⅞	0.45	0.44⅝	0.44⅝	0.44½	0.44½	0.44⅝

Foreign Flour and Grain News

A slight improvement in the export situation has been a feature of the Canadian flour trade of late, but prices still rule too high to permit of any notable amount of business being done. Freight rates, too, both rail and ocean, are militating against any pronounced turn for the better and the milling fraternity generally is hoping that the efforts of the Canadian National Millers' Association to impress upon the Dominion Board of Railway Commissioners the desirability of revising flour export rates with a view to removing the discrimination which exists on flour as against shipments of grain, will be successful.

There has been no change in prices since last report. First patents are quoted at $7.50, second patents at $7, and strong bakers at $6.80 per barrel in jute bags, ex-track, less the usual 10 cents per barrel for spot cash.

Winter wheat flour prices also show no change from last report. First patents are quoted at $7 to $7.25, choice grades $5.75 to $6, and broken lots at $6.50 to $6.75 per barrel, ex-store. White corn flour remains steady at $4.50 to $4.60 per barrel in jute bags, delivered.

With the exception of an order from the Soviet Government of Russia placed originally with the United States but filled by Canada the executing of a small order for the Grecian government and several small shipments for famine relief in different parts of Europe the grain export trade has of late been practically at a standstill.

The main reason for the lack of orders from Europe is said to be the discrepancy between the amount the buyers are willing to pay and the figure demanded on this side of the ocean by the vendors. In some cases the margin is as high as 5 cents a bushel, and the nearest approach to the figure demanded, offered by European buyers, is two cents a bushel too low. Furthermore, shipment is required immediately the order is placed, and with few sailings taking place from the coastal ports this winter this is a difficult condition to fulfil. It is stated that orders for "future delivery" have not been received in Montreal for some time.

The order for the Soviet Government of Russia, which originally called for American spring wheat could not be filled at the price Russia was willing to pay. The order, which amounted to about 3,150,000 bushels of wheat, was supplied by Canada but was shipped from a port in the United States. Half of the amount was Manitoba Northern No. 1 wheat, and the other half was Federal No. 1.

Montreal grain exporters will not venture to predict any appreciable increase in trade before spring. The general idea is that it is impossible to forecast future conditions, everything depending upon the movements of the buyers in Europe.

FRANCE.—Milder weather has, with the exception of some local frost in the northern departments, been continued. Rains have been reported fairly extensively throughout the country. Sowing has been resumed with some activity, and it is to be hoped that present weather conditions will continue. Complaints regarding the appearance of the young plants have notably diminished.

MANCHURIA.—According to a recent British Consular Report, the Wheat crop is said to be 25 per cent to 40 per cent below that of last year. Soya Beans are a good crop, while other crops appear to be normal to good.

GERMANY.—The latest report of the International Institute of Agriculture states that Winter sowings, particularly those of Wheat, have been delayed. Winter Rye and Barley are all in the ground. It is believed that winter sowings, as regards acreage, are not below those of last year.

ITALY.—Very cold weather was prevailing at last reports, and falls of snow were expected. Sowing has been carried out under favorable conditions, but in the northern provinces the plants did not obtain a good start, owing to scarcity of moisture. In Central and Southern Italy the young crops are coming up nicely.

BELGIUM.—The weather was too dry during the sowing period for the seeds to find a good bed, and consequently the plants have made a somewhat irregular start.

AUSTRALIA.—Harvesting is actively proceeding and a good percentage of the crop has already been cut. Outturn reports are not as favorable as could be desired. Occasional showers or thunderstorms have been experienced.

GREAT BRITAIN.—The trade in home milled flour continues to be slow. With the holidays over, fresh orders from bakers are practically non-existent. The cheap grades of Australian are now in much smaller demand, but the better grades are still difficult to move. American offers are firm; Minnesota Spring Patents could not be laid down under 47s ($10.07); Manitobas, however, can still be bought at last reported rates. There is again a very light clearance from the Atlantic seaboard. Recent shipments to U. K. ports amount to 35,000 sacks, and to the Continent 29,000 sacks. British millers have made no change in prices during the past fortnight.

BULGARIA.—Sowing was carried out under favorable conditions.

NEW ZEALAND.—This year's Wheat area is provisionally estimated by the Census and Statistics Office of New Zealand at 363,000 acres, compared with 223,000 acres last year. On the other hand, the area under Oats has decreased, only 470,000 acres being sown with this grain, compared with 575,000 acres in 1920.

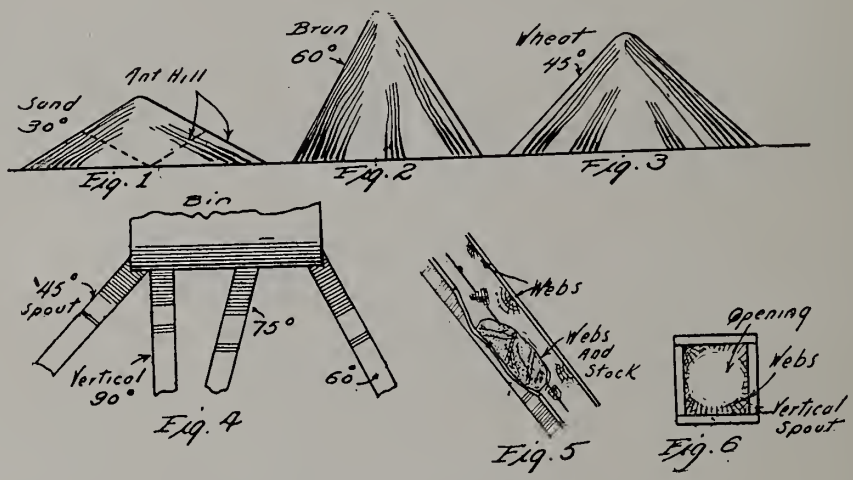
SWITZERLAND.—It has been unanimously decided by the Neutrality Commission of the Swiss National Council to maintain for some time longer the provisional wheat monopoly.

ROUMANIA.—After the recent beneficial rainfall, which was general throughout the country, heavy frosts set in, bringing sowing to an abrupt conclusion. Only a small acreage has been put under Wheat. It is expected that the agreement with the banks for the export of the 50 per cent. quota of grain delivered to the Government, will be cancelled before the Spring.

The Elevator Operator

ANGLES OF INCLINATION FOR GRAIN AND STOCK SPOUTS VARY.

Practical elevator men know that the best angle for grain and stock spouts is of course, 90 degrees, or vertical. But spouts may be inclined considerably and still work perfectly well. This being the case, how far may a spout be inclined and still do its work acceptably? Some kinds of material will slide freely down an inclined spout where other material would not move at all. Thus the steepness, or the least possible pitch of a spout which will do the work well, depends upon the "Angle of repose" of that particular material. The cuts herewith show the angles of repose for several kinds of material. Sand, for instance, as shown by Fig. 1, will lie still up to an angle of 30 degrees—dry sand, not that which is wet—and above 30, for a few degrees, the sand does not seem to care whether it slides down or lies still. But when the inclination is increased but a very little above 30 degrees, then it will surely slide down.



Many animals and even insects seem to have an instinctive idea of the angles of repose for it is never exceeded in any material the ants work with. Notice the first ant-burrow you find beside the path. There is a comical pile of dirt, truly circular as though laid out by a good engineer, and the slope from the burrow up to the circular crest is truly 30 degrees as though actually laid out to that slope.

Let a pile of bran collect on the floor under a spout and its sides will form to an angle of about 60 degrees as shown at Fig. 2. Some kinds of bran may pile up a little steeper, some a bit lower, for each kind of material has its particular angle of repose, below which it will lie still and above which angle the material will slide or roll. Fig. 3 shows how wheat will pile up to about 45 degrees. There will be found a few degrees variation even in different varieties of wheat, and other grains have their own particular angles of repose below which they cannot be depended to flow through spouts.

A most interesting study of various materials and their repose angles may be made with very simple apparatus. All that is required is a piece of board or sheet metal, some pieces of wood for blocking and a draftsman's protractor, or, better yet, one of the little squares used by carpenters in which there is a sliding blade detachable from the metal head, and a graduated circle inside of which a level vial may be moved around to any angle. One of these combination squares is ideal for measuring repose angles but a common protractor may be used if the combination square cannot be obtained.

Getting Repose Angle.

Block up the wooden or metal slide board a short distance above floor or table and let material slide down the board. Adjust the inclination of the board until the material thereon does not seem to either lie still or slide off. Measure the angle of inclination of the surface and that will be the angle of repose for that particular material. Let a considerable pile of material flow down the slide until a pile has accumultated below on table or floor, then measure the angle of the side of this pile and compare it with the angle of the slide. Probably the two angles will not be many degrees apart but if the slide angle be greater or less than that of the side of the pile of material, then you may credit the difference, one way or the other, to the slide-value of the particular surface over which the material has been passing. Thus a smooth polished surface may be found at a flatter angle than the sides of the pile, while a rough surface may be at a greater angle than the side of the pile.

While the angle of repose of any material may give an idea as to the flattest spout down which that material will flow, there are other things which must be reckoned with. Fig. 4 shows spouts of various degrees of inclination, ranging from vertical and 75 degrees, down to 60 and even 45 degrees below which angle no spout should ever be built into the house. True, spouts do work at flatter angles than 45 degrees, but who has seen one which could be fully trusted? Even 60 and 70 degree spouts have been known to clog.

Probably the worst thing the flat spout has to contend with is web. Fig. 5 shows what has happened to more than one spout, and it will happen in plants even where every effort is exerted to fumigate and clean spouts, elevator legs and all grain storing and conveying mechanism.

The Elevator Operator

Take down a spout as in Fig. 5, even where average care is given to cleaning and fumigating, and it is nothing uncommon to find small webs adhering to corners of the spout, the upper corners especially, while some of the webs may have been detached in some way, fallen to the bottom of the spout and there become anchored, while dust, some material and other webs have collected as shown until a considerable portion of the spout has been filled.

How Chokes Commerce.

Here is the true beginning of a choke and when such collection has anchored itself in the bottom of a spout, even a nearly vertical one, then a choke at that particular point in the spout, is due very soon. Here is the real trouble with flat spouts. The flatter they are, the easier it is for the web to anchor itself, the more material will the web hold upon it, and the quicker a choke will develop.

Even with vertical spouts, web chokes are by no means unknown, although their occurrence shows mighty poor cleaning method. Did you ever take down a section of vertical spout and find the interior in the condition shown by Fig. 6? More than once have operators found this condition, which was caused by webs collecting in the spout corners between very infrequent cleanings. When a spout in this condition is found, you may take it as evidence at least of two things. First, as an advocate of frequent and thorough spout cleaning, and second, a direct bid for round metal spouts with no corners to harbor webs and vermin.

SOUTH AFRICAN ELEVATOR CONTRACT WORTH NEARLY SIX MILLION DOLLARS.

London.—Officials of the Menkins Company which obtained the contract for erection of the South African Government grain elevators, sailed for South Africa recently with the remainder of their staff of experts, consisting of 26 Canadians and a number of Englishmen, Australians and Americans.

Interviewed before his departure, Mr. Menkins emphasized that his firm is Canadian and the material to be used would be mostly British or South African. Out of an outlay of £1,250,000 ($5,750,000) in construction work, less than £30,000 ($135,000), he said, would go to foreign countries for special requirements which could not profitably be supplied in Great Britain.

CLAIM INCREASED GRAIN ELEVATOR SPACE IS REQUIRED AT VANCOUVER.

Vancouver.—The Vancouver Board of Trade has forwarded representations to Ottawa for additional grain elevator capacity in Vancouver. Additional accommodation for at least 1,000,000 bushels is needed, it is claimed. The present Government elevator is full and grain from the prairies is coming steadily. So far 100,000 tons of wheat have been shipped from here this season and local business interests believe that this port will become a permanent wheat shipper if sufficient facilities are provided.

MAY START CONSTRUCTION OF HUGE ELEVATOR AT MONTREAL SHORTLY.

Montreal.—Construction of what eventually will be the world's largest elevator is due to commerce here in the late spring or early fall of this year unless unforeseen circumstances intervene.

The enormous growth in the volume of grain in and out of the Port of Montreal has made the construction of more elevator space absolutely essential. During the past year, it is stated, business had to be refused by the Harbor Commissioners owing to the lack of accommodation.

The growth of the harbor is revealed by the fact that it was not expected that the present volume of traffic would be reached until fifteen years from the present time.

Will be Built at Maisonneuve.

The proposed elevator, which in all probability will be known as No. 3, will be constructed, according to present plans, at Maisonneuve on the deep-water front. The choice of this site has as its object the relief of the present intense congestion in the upper harbor. Under the plan much deep-sea shipping that now has to find berths in the upper basins of the harbor to get grain cargoes will be able to secure full loads without going to the main harbor.

It will be built in three sections. The first section alone will be nearly as large as the present No. 2 elevator. Completed the structure will be as large as the three existing elevators put together. No. 1 and No. 2 Harbor Commissioners elevators can accommodate about 7,000,000 bushels; the Grand Trunk Railway elevator on Windmill Point has a capacity of about 2,500,000 bushels.

To Minimize Danger.

The foundation will be based on the solid rock, the structure itself being made of concrete and steel. The most modern devices for safety and expeditious handling of grain will be incorporated. The experience gained in the minor accidents that have occurred from time to time in the Commissioners' elevators will be utilized in minimizing the danger of any serious disaster, a danger usually feared in connection with the handling of large quantities of grain. Special provision will be made for the installation of devices that will stir up as little dust as possible, and thereby eliminate a serious hazard.

The greatest volume of passenger traffic in the history of the Port of Montreal is anticipated during 1922 with a corresponding increase in 1923; but it is not likely that the first section of the new elevator will be in shape to relieve the situation until the fall of 1923. This will mean that additional berthing space will be required in the upper harbor.

As previously stated in "Canadian Milling & Grain Journal," the Grand Trunk Railway System is also planning an addition to its elevator plant at Windmill Point.

HUNTLEY MANUFACTURING COMPANY HAS REORGANIZED UNDER NEW MANAGEMENT.

One of the largest business deals consummated in Silver Creek, N.Y., in many years was completed recently when Mr. Charles G. Hammond disposed of his entire interest in the Huntley Manufacturing Company, one of the largest manufacturing plants in the village. Mr. Hammond began his career as a mill furnisher in 1883 when he became a member of the firm of Huntley and Hammond, which firm was afterwards succeeded by the present firm of Hammond-Homberger Company. In 1886 he bought an interest in the firm of Messrs. G. S. Cranson & Son, which firm was continued under various names until it was succeeded by the Huntley Manufacturing Company in 1896. This business has been built up from a small concern to one that is now well and favorably known throughout the United States in all large flouring mills, elevators, canning factories and in the peanut industry. The transfer of the Hammond interest carries with it the control of this large industry. The following officers, all of whom have been actively and prominently connected with the business for many years, have been elected under the new management:

President and Treasurer, Walter M. Buchholtz, who succeeds Mr. Hammond; vice-president, W. A. Chapman, who succeeds L. C. Hammond; secretary, A. B. Chapman.

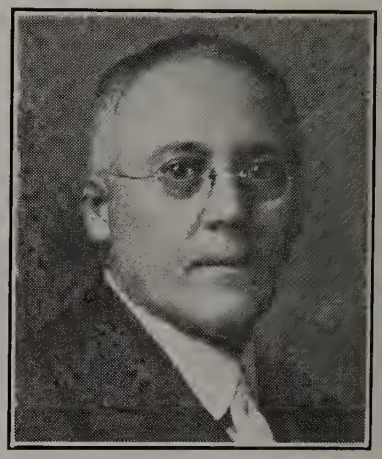
WALTER M. BUCHHOLTZ
President and Treasurer of the Huntley Manufacturing Company.

Mr. Buchholtz, the new president, entered the employ of the Huntley Manufacturing Company in the fall of 1917, assuming the position of treasurer and assistant to the president, and at once taking an active part in the management of the business. His earlier business experience had been in the banking business in which line he served for 18 years. For six years he was the cashier of the Bank of Genesee, Batavia, N.Y., of which institution he was also a director. He served the city of Batavia for several years as its treasurer. In 1914 he became connected with the Manufacturers' and Traders' National Bank of Buffalo, and the following year was elected cashier and local manager of the First National Bank of Silver Creek, N.Y., which position he held until he became associated with the Huntley Manufacturing Company.

Mr. William A. Chapman, the newly elected vice-president of the Huntley Company, is well and favorably known throughout the United States in the canning industry. During the many years he has been connected with the Huntley Company he has built up through his own efforts the strongest line of machinery pertaining to that great industry. He is also prominently known in the peanut business in the South and through his efforts the Huntley Company's machinery has been placed in nearly all the large peanut plants of the South and Southwest. His knowledge of the Monitor line of machinery is unexcelled, and placing this line in a class by itself has been one of his chief aims in life. How well he has succeeded is shown by the large volume of business the Huntley Company has received since he became connected with it. His present position as vice-president of the company will give him the fullest opporunity to further build up this large industry.

WILLIAM A. CHAPMAN
Vice-President of the Huntley Manufacturing Company.

Mr. A. B. Chapman, the new secretary of the Huntley Company, has been connected with the milling machinery business for many years and is well acquainted with all the details of manufacture and



A. B. CHAPMAN
Secretary of the Huntley Manufacturing Company.

management. For many years he has been secretary and manager of the Hammond-Homberger Company of Silver Creek, N.Y., manufacturers and dealers in bolting cloths extensively used in the milling and allied industries. The business of the Hammond-Homberger Company has been in every way a success and Mr. Chapman's experience and knowledge of the milling business should be a valuable asset to the Huntley Company.

Mr. Leon H. Brand, in charge of sales for the Company, was born into the grain cleaner business. After a few years experience in business generally, he joined his grandfather, Mr. Simon Howes of Silver Creek, N.Y., starting in as a stenographer. He remained with Mr. Howes until the latter's death, when he joined in the promotion of the Invincible Grain Cleaner Co., being one of the original stockholders of that concern. He remained with them until the call of his country, when he went overseas spending a year in France in welfare work. On his return, he joined the Huntley Mfg. Co. in June, 1919, as a special representative. After about a

LEON H. BRAND
Sales Manager of the Huntley Manufacturing Company

year's work on the road, he was made salesmanager, which position he retains under the new management.

There are few men in the business with a better knowledge of its requirements than Mr. Brand. He is known personally to many in the trade and by signature, to thousands, and he takes personal pleasure in giving his best to the many correspondents of the Huntley Mfg. Co., imparting to matters that personal touch which means so much to the seeker after information regarding a probable purchase of machinery.

The Huntley Manufacturing Co., Ltd., Tillsonburg, Ont., which produces all models of the famous "Monitor" machinery and equipment is the Canadian headquarters of the Silver Creek firm. Messrs. Kipp-Kelly Ltd., Winnipeg, Man., are the Huntley Manufacturing Company's able representatives in Western Canada.

Canadian flour is selling in Cuba at about one dollar per sack cheaper, grade for grade, than American flour.

FLOUR EXPORTS THROUGH MONTREAL INCREASED SUBSTANTIALLY IN 1921.

Montreal.—During 1921 exports of flour through the port of Montreal showed an increase of approximately 1,000,000 sacks over those of the previous year. Total shipments through the port were 3,326,806 sacks compared with 2,328,884 in 1920. Shipments to Great Britain and Continental markets were 2,887,720 sacks, St. John's, Newfoundland, 313,006, and British West Indies, 126,080.

Exports to the United Kingdom and Continental ports while showing an increase of 558,836 sacks as compared with the season 1920, represent a decrease of 4,648,851 sacks from the 1919 shipments. Exports to St. John's, Newfoundland, exceeded those of the previous year by 202,354 sacks.

The principal shippers of flour through the port in the past season were:

	1921 Sacks	1920 Sacks
Ogilvie Flour Mills Co.	308,494	344,714
Lake of Woods Milling Co.	161,296	163,142
St. Lawrence Flour Mills Co.	117,337	36,083
Maple Leaf Milling Co.	178,013	93,579
Dominion Flour Mills Co.	180,704	38,102
Canadian Wheat Board	.....	39,130
B. B. Rye & Flour Co.	.....	5,100
Canadian Export Flour Co.	500	500
Sundry shippers	14,804	.....
Canadian Pacific Ry.	944,444	869,498
Grand Trunk Ry.	1,181,052	633,532
Canadian Northern Ry.	61,814	.....
Total	3,326,806	2,328,884

U. S. GRAIN EXPORTS IN 1921.

Washington.—Heavy increases in United States exports of grain during 1921 as compared with 1920, including an advance of more than 700 per cent. in corn shipments, were announced recently by the Commerce Department.

Exports of corn aggregated 129,000,000 bushels valued at $93,000,000, compared with 18,000,000 bushels worth $26,000,000 in 1920.

Exports of wheat for 1921 aggregated 280,000,000 bushels valued at $433,000,000, compared with 218,000,000 bushels, worth $597,000,000 in 1920. Flour exports for the past year amounted to 17,000,000 barrels worth $118,000,000 as against 20,000,000 barrels valued at $224,000,000. Exports of rice during 1921 aggregated 600,000,000 pounds, valued at $21,000,000, compared with 393,000,000 pounds, worth $27,000,000. Cotton exports for 1921 totalled 6,474,000 bales of 3,339,000,000 pounds, valued at $534,000,000, as compared with 6,159,000 bales of 3,179,000,000 pounds, worth $1,136,000,000.

DOES YOUR ROOF NEED THATCHING?

Here is an easy way to patch a leak in a metal, rubberoid or asbestos roof. Just scrape off the old paint around the hole, apply some ordinary roof paint for several inches around it and on this lay a piece of cotton flannel, fuzzy side down. Press the flannel down to exclude the air and then give it a good coat of paint. The cloth will easily hold the paint and when dry will turn water.

Elevator, Mill & Personal Notes

Medicine Hat, Alta.—Additional machinery is being installed at the Lake of the Woods mill here, which will increase the capacity of the plant from one thousand to fifteen hundred barrels a day. No new construction will be necessary as the present building has sufficient space and power to accommodate the new unit.

Grande Prairie, Alta.—The Northern Light Milling Company, Ltd., whose plant was destroyed by fire during the summer, announces that it will rebuild in the early spring. The new plant, according to the manager's statement, will be the most modern of the smaller mills of the West, with a capacity of 125 barrels per day.

Saskatoon, Sask.—The Interprovincial Flour Mills Co., Ltd., who have mills in Ontario, Alberta, and Saskatchewan, and manufacture the "Provincial," "Sentinel," and "Stalwart" brands, have appointed a European agent with offices in London, where large stocks are held.

Port Arthur, Ont.—Use of screenings from the elevators refuse after the cleaning of grain, has become so general in Port Arthur and Fort William that some hundreds of thousands of dollars will be saved this winter on coal bills. Experiments in their use as fuel made during the early part of the cold season have proved so successful that they are used now in practically all the big buildings.

Fredericton, N. B. — 28.028 acres were planted to spring wheat in this province during 1921, producing 441,400 bushels, according to the Provincial Department of Agriculture. Other agricultural statistics were: Oats, 284,728 acres, yield 6,905,000 bushels; barley, 8,898, 175,700; buckwheat 49,812, 1,146,000; potatoes, 74,875, 16,192,000; hay and clover, 625,000 tons from 694,497 acres; and turnips 17,745 acres, 6,202,000 bushels.

Vancouver, B.C.—The amount of Canadian wheat booked for shipment via the Panama Canal to the United Kingdom up to the middle of December, 1921, was approximately 2,000,000 bushels, all of which was shipped in bulk. It is highly probable that the quantity will be doubled by the end of the season, but a larger volume could not be handled through the port in bulk unless elevator accommodation be increased, which may be done before the next season.

Toronto. — Word from Midland indicates that good progress is being made in getting the new mill of the Copeland Flour Mills Company, Limited, in shape for active operations. It is expected that the company's product will soon be on the market.

Toronto.—Another of a series of meetings being held by the executive of the Canadian National Millers' Association took place at the King Edward Hotel recently, when freight rates and other matters pertaining to the milling and grain trade were under consideration.

Shellbrook, Man. — A fire of unknown origin completely destroyed recently the Hallet and Carey Company's elevator containing 12,000 bushels of grain. This is the third elevator blaze within the past twelve months at this point, the last occurring in August, 1921.

Mr. William R. Bawlf, President of the N. Bawlf Grain Co., Ltd., Winnipeg, was in Montreal recently. While in the city Mr. Bawlf was introduced on 'Change by Mr. S. S. Pocock, Montreal representative of the N. Bawlf Co.

Mr. Hugh N. Baird, of Baird & Botterell, grain brokers, Grain Exchange Building, Winnipeg, was a recent visitor in Montreal.

Messrs. Mercy and Kellog, who are connected with the Armour Grain Company, Chicago, were recent callers at the office of Messrs. C. R. Vannatter & Co., Ltd., Dominion Bank Building, Toronto.

Mr. Charles Ritz, Eastern Manager for the Robin Hood Milling Company at Montreal, called on the milling and grain trade in Toronto recently.

Hon. J. A. Robb, of Valleyfield, Minister of Trade and Commerce in the new Federal Government, was a recent visitor in Montreal. During his stay in the city Hon. Mr. Robb attended the closing of the exhibition of French products at l'Ecole des Hautes Etudes Commerciales on Place Viger Square.

Messrs. G. D. Robinson & Co., Montreal, announce that they have admitted as a partner Mr. T. A. Climo who was previously with Messrs. Thomson & Earle Reg'd. The partnership will be known as Robinson & Climo, grain and freight brokers and forwarding agents, with offices in the Coristine Building.

Winnipeg.—The Anglo-Canadian Grain Co., Ltd., has been incorporated for $250,000.

Mr. Aaron Cohen, grain broker, Winnipeg Grain Exchange, was a recent visitor in Montreal.

Mr. H. L. Rice, president of the St. Mary's Milling Company, St. Mary's, Ont., was a business visitor in Toronto recently.

Edmonton.—Considerable grain is being received in Edmonton over the Edmonton, Dunvegan and British Columbia railway as a result of the freight rate reductions, which became effective recently. It is expected that shipments of oats from points west of the Lesser Slave will be heavy during the next six weeks.

Cigarettes and matches are costly playthings and expensive sources of pleasure and entertainment, and in company with dust have made bad combinations. This knowledge every fireman should possess, and use at every opportunity to impress on the fellow who "does not know."

DO IT NOW.

A subscription to
"Canadian Milling & Grain Journal"
will repay you many times over.
$3 for twelve months.

CANADIAN DOLLARS FOR A CANADIAN PAPER.

THE PRACTICAL MILLER

SMALL MILLERS AND THEIR PROFITS.

Accounting has. in the past, been generally considered by operators of small mills to be an unproductive expense and has therefore not been given the attention it deserves. However, recently, there has been a general realization that, without accurate knowledge of the cost of production and the expenses of doing business, the manager of a mill is as helpless as the driver of an automobile without a steering wheel.

It is the proper ambition of every miller to dispose of his products at a price which will return to him, first, the cost of the article, including his expense of doing business, and, secondly, such a profit over and above the cost as will return to him a fair rate of return on his invested capital. This is but fair and yet great difficulty begins when cost information is misleading or inaccurate.

In the past it has been more or less a custom for the mills to figure their profits on a basis of a certain profit per ton — the sensible and only sane method of percentages having been entirely disregarded. Unfortunately, many mills continue this method in the present day, although the commodities are costing three and even four times as much as in the olden days when this method of so much per ton was established.

This method never was right and to-day it is commercial suicide. Speculation in the past was the mainstay to support such a method of figuring, but to-day speculation is fast coming into bad repute and is classified profiteering, and it will soon bring forth its own reaction.

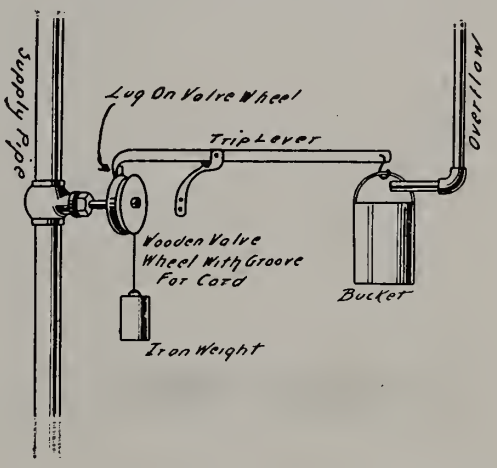
SPOUTING AND THE DUST EVIL.

The old-time notion that a flouring mill must necessarily be a place of dirt and dust, has, in recent years, been very much modified; indeed, with the late improvements in dust collectors as well as in millwright work, and the nicer adjustments of all milling machines, there is no longer the excuse for dusty mills that prevailed in former years.

It sometimes happens that the spouting of finished products — bran, shorts and the like — but especially bran, when entering or spouted into the top of a deep bin, will cause the unoccupied space to be filled with a very fine and disagreeable dust, and when it is desirable to investigate by opening a door from time to time, the dust laden air within blows out in the face and covers the surrounding objects. It is easily conceivable that at night when investigating with lanterns danger of dust ignition or explosion is considerable. These conditions may be to a great extent modified or abated by applying dust tubes to the side of the bin; they may be four inches in diameter and of length suitable to height of bin; they should start about twelve inches from the floor extend upward to within twelve inches of the top. The regular dust collector fabric and any number of tubes may be used. They should be neatly fitted to level boards, connected to the bin by pockets, the bottoms of which may have a slant of 60 degrees; these pockets should be placed over openings in the bins, six inches in width and long enough to take in all the tubes. If four tubes are used, allowing three inches between each tube, the opening should be thirty inches long and a single long pocket for each end use. The pocket part of the lower end will be below the level board, but at the top it will be above. The tubes can occasionally be shaken by hand when the stock in bin is low, and any collected dust inside the tubes will drop down through the pocket into the bin. As the bin fills up of course an increasing portion of the tubes becomes useless, but the air space in the bin also diminishes in the same ratio, and the need of exhaust becomes correspondingly less. But the tubes will be effective until the upper opening is covered, at which time the need of them will cease.

AN AUTOMATIC WATER SHUT-OFF.

This sketch shows an automatic water shut-off which will come in handy in several places about the mill. A wooden wheel with a groove around the center is put on the valve stem, and a cord with a weight fastened in such a way the cord winds around the wheel. A lug is fastened on side of this wheel. When the valve is opened the string winds up on wheel and



the weight raises. The trip lever is then placed against the lug and the weight pulling down holds the tripper in place. When the tank overflows the bucket is filled and the weight of the bucket of water pulls the trip lever, allowing the iron weight to lower and close valve. The valve should work easily, but not too freely, for best results.

BELT SPEEDS AND POWER DELIVERY.

Belt speeds must be right if machinery is to deliver full power. If a pulley is needed with a diameter slightly greater than the one in use, it is far cheaper to lag the pulley face with leather belting than to buy a new one. A covered pulley in addition has a much higher coefficient of friction than one with a smooth metal or wooden face. The leather lagging will wear off in time, but any ordinary mechanic about the plant can rig up a clamp.

PORTLAND GRAIN SHIPMENTS.

Portland, Me.—Grain shipments through this port in 1921 exceeded those of the previous year by 413,090 bushels. The total was 18,609,376 bushels.

THE PRACTICAL MILLER

A REVIEW OF THE CANADIAN FLOUR EXPORT TRADE SITUATION.

During the past year the Canadian export flour trade has been meeting a great deal of competition, as well as having to do something in the way of overcoming the United States high tariff wall. For this reason exports of flour during the past four months have undergone considerable shrinkage. It is now felt that prices are nearing the bottom of the decline, although the future of the grain market is an uncertain one and the price of flour rests largely upon the course of wheat prices.

Immediately after the turn of the year there was a small spurt in the demand, but this was short-lived, and present export trade is dull.

Competition has been and is very keen in all the markets of the world and especially so in the east. In Japan and North Africa, Australia is Canada's chief competitor, who is selling her soft wheat flour at a very low figure. Constantinople where ordinarily the export of Canadian grain is considerable is now receiving grain from the Egyptian Government, who bought large quantities of Australian soft flour and mixed it with Canadian hard wheat flour.

In Scandinavia the market is quiet and freight boats have been known to ply backward and forward between ports in a fruitless endeavor to get freight.

The Irish markets are brisk and in marked contrast to the United Kingdom markets which are dull, despite the fact that several leading grain experts have prophesied that demand would increase during January and December. It is known, however, that stocks are getting low and that in the near future there will have to be increased buying.

The Emergency Tariff Bill has practically killed all exports of flour to the United States and consequently the trade has lost a large amount of business. The demand remains good for bran and middlings. The difference in exchange helped Canadian millers in the early part of this year, but owing to the decline of the premium on American money Canadians find that the advantage is not enough to compensate them for the handicap of the high tariff.

The loss of trade with the United States has made Canadian millers turn their attention to Japan, who, owing to the fact that her last year's rice crop was a poor one, is now being compelled to buy flour. Unfortunately America has been underselling Canada in this market with their flour of poorer quality. "Japan," says one Montreal miller, "does not want to pay a high price for wheat although she wants it to look white. Northwest Canadian wheat flour is wasted on her and if we are to compete with the United States we must reduce the price of our flour by lowering the quality through milling processes. The ideal flour for this market would be from the wheat grown in Ontario, but owing to the high freight required to transport the flour across to a Pacific port the proposition is not possible."

Canada is sending no grain to Russia. She is watching Mr. Hoover's experiment of sending grain across in bulk and letting the Russians do their own milling, very closely. Mr. Hoover's policy, it is said, is entirely contrary to the best information obtainable concerning the keeping qualities of corn, the equipment necessary to handle it properly, the character, location and facilities of Russian mills, and the habits and customs of the Russian people.

Trade with Italy is small and opportunities for Canadian flour have decreased, not because of unpopularity, but because native milling industry has considerably increased. Additional reasons militating against the prospects of increased sale are the high Italian tariff and the long transportation haul.

Canadian millers hope to develop trade with Jamaica on a larger scale than has been possible in past years as the C.P.O.S. now run a steamer direct from St. John to Jamaica, once a month and the Canadian Merchant Marine run two a month. The direct sailings to Jamaica will reduce the cost of freight considerably and put the Canadian millers in a better position to compete with the American product.

THE ROLLERMAN AND HIS DUTIES.

In the majority of mills the rollerman is responsible for the feed of the mill. He should endeavor to keep this steady and regular, as any diminution or "running off" of the wheat will affect both the output of the plant, and also the quality of the flour. He should also make himself conversant with the composition of the grist, and in this connection it is a great advantage to weigh the wheat at regular intervals. The bran, sharps, and middlings should also be weighed. The rollerman then has (to put it figuratively) his hand on the pulse of the mill: Another important duty is the setting of the breaks. The rollerman should first see that each set of rolls receives its proper share of feed; also, that this is spread evenly over the full length of the feed roll. The backplates, on which the feed falls before passing through the rolls, should be kept clean and free from "moth," etc.

The first, second and third breaks are usually set to a given percentage. This is most accurately done by means of a pair of scales and hand-sieves. It is important that each pair of rolls on the same break should, as nearly as possible, be set to do the same work, the result being uniformity in both the "chop" and "meal." The fourth break requires careful handling, for should these rolls be set too close, it will have a detrimental effect on both the flour and bran, the former suffering in color and the latter in quality.

A moderate pressure is best applied to the fourth break; also to the coarse rolls, X, Y, F, and J. These also affect the color of the flour if set too close. To pass to the reductions, the grinding on A and B should be done, preferably with the object of making good stock for the C rolls, than a great production of flour, though this is not always advocated. When C roll is reached, however, as much pressure as possible is allowable, always guarding against ex-

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cessive heat and "sweating." The reduction roll D should also be set to yield as much flour as possible, but the remaining reduction, B2, E, G, H. K, L, and, in some mills, M, are best treated moderately as regards the grinding.

An important duty of the rollerman is to keep a watchful eye on the exhaust system. The proper working of this will greatly aid him in keeping his machines cool and clean. He should also see that the lubrication, both of roller bearings and feed rolls, is efficiently carried out. Hot bearings and stiff feed rolls add not only to the worries of the rollerman, but also to the power required to drive them.

In conclusion, the rollerman should, at week-ends, or when the mill is stopped, overhaul elevators and driving belts. The breaking down of a set of elevators, or even the breaking of a belt may mean a big "choke," and a consequent loss of production. Prevention in these cases is always better than cure.

MILL SWEEPING AND DUST TROUBLES.

In spite of the fact that the larger plants employ men to do the sweeping and nothing else, it seems that it is the large mills and elevators that have dust trouble. This is perhaps due to the fact that the big concerns handle so much dust-producing grain and material that a considerable amount of dust accumulation is a natural result. The small mill has a mighty hard row to hoe in the matter of keeping the dust down within its walls, due to the fact that all grain is handled in the mill. It certainly is a big mistake to store grain in the mill proper, and at that, in wood bins. Again, it costs money to build separate storage for grain and then build it of fireproof construction. It pays in the long run, and if the necessary funds are not at hand to build fireproof grain storage outside the mill, it will be better not to build the mill at all. Since the owner of the mill must be more interested in his plant than any other man on the job, he will do well to look after the dust accumulations. The owner, the man who hires the help, is about the only man on the job who can enforce his demands.

MOISTURE CONTENT AND ITS EFFECTS ON THE KEEPING QUALITIES OF FLOUR.

The moisture content of flour has been receiving more attention of late years in both contract specifications and government regulations. There is no question but that the moisture content is an important factor in considering the value of flour as to keeping qualities under the average conditions of storage. It is advisable for the miller, when accepting contracts in which the moisture content is specified as to maximum limits, to consider the average climatic conditions at point of destination and if necessary to make allowances for same.

The moisture content of flour is continually changing during storage and transit due to variations in climatic conditions. These fluctuations vary in severeness of course, depending upon the season of the year and the locality. In this relation relative humidity has the greatest influence.

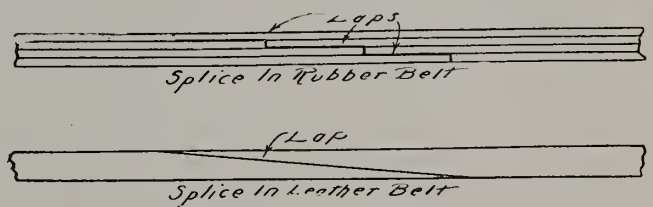
It should be remembered that water vapor is always present in the air, due to the constant evaporation taking place, and the percentage present is dependent upon the temperature, as warm air will hold more vapor than cold air. Flour stored under conditions of high relative humidity will absorb moisture from the air, while a low relative humidity (the temperature remaining constant) will cause evaporation. Flour milled in mild dry climates will usually lose at least one half of one per cent of moisture during the first week, but a long haul to eastern points quite often means a slight gain.

Correspondence

The Editor, "Canadian Milling & Grain Journal."

Dear Sir: Not long ago I heard a couple of millers discussing belt fastenings and belt splices. They brought in the fact that the leather belt splice gave 100 per cent of strength and that the joint was fully as strong as any other part of the belt. I believe this to be the case and would like to hear from other millers regarding the matter.

But I eventually was drawn into a hot discussion regarding the strength of a spliced and cemented rubber belt. The men above referred to claimed that a splice in a rubber belt made the joint as strong as that in the leather belt, that is, 100 per cent of the uncut belt. I flatly contradicted this statement and claimed that when a rubber belt (say a four-ply)



was cut back as shown by the sketch—the joint could never be more than 75 per cent as strong as the uncut belt, figuring that one-fourth of the belt has been cut off at each and every lap, therefore the weakest place in the belt could never be more than three-quarters the strength of the uncut belt.

I claimed that, when a leather belt has a splice made with a lap of good length, say 7 or 8 inches as shown, no thickness of leather has been cut across, therefore the joint strength is fully 100 per cent of that of the solid leather. But when a ply of rubber belt is cut off, a certain amount of strength is lost. In a four-ply belt, the loss would be 25 per cent. In a six-ply belt the loss would be 16 2-3 per cent, leaving 83-1-3 per cent of belt strength in the splice.

Now, I also claim that if it were possible to make a lap splice in a rubber belt the same as shown in the sketch of a splice in a leather belt, it would be possible to obtain 100 per cent of joint strength in a rubber belt. Yours truly. C. B.

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HEAD MILLERS AND MILL LABORATORIES.

There are still a few head-millers who do not see the advantages of a mill laboratory, but it is just because they don't understand that the laboratory is not put in to tell them how to run their mill nor as a check to "show up" their work, but is just an aid to better flour and more economical milling. In fact, the chemist is a head-miller's assistant with chemical training.

How does the laboratory help the head-miller? In practically every milling operation in the production of flour.

First, By selecting the proper wheat. Millers know that to have the right quality and blend of wheat is the greatest help a head-miller can have.

Second, To keep the wheat uniform. Uniform wheat to grind makes uniform flour, which is a great factor in securing steady customers.

The next great help the chemist furnishes is the control of moisture in wheat going to the first break roll, as wheat of different moisture content will not mill alike; but if quality and moisture both are kept uniform, then the head-miller is in the position to get the most out of the wheat with the least worry.

The head-miller has only sight, feel and smell to guide him in producing flour, but with the help of the chemist, he has dozens of ways to test all stock for quality that he cannot do for himself. The principal ones are ash, moisture, gluten and baking quality. With these tests to help him, he can so mill his wheat and flour his stock as to produce the very best quality of flour out of the wheat.

AUSTRALIAN MILLERS UNFORTUNATE.

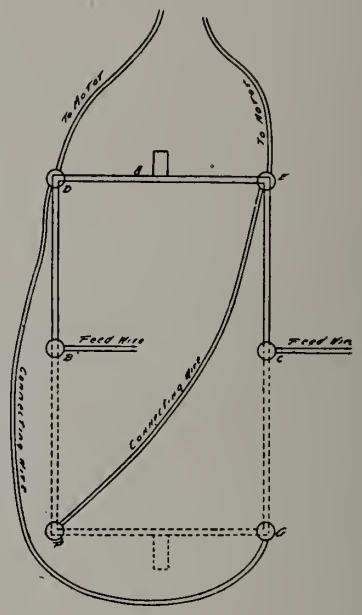
In accordance with a decision by the Australian Wheat Board, the restrictions upon millers desiring to do business with Europe have been renewed. The markets hitherto open to them were those in the East, the Pacific Islands, New Zealand, and South Africa. They can now transact business on similar terms with the United Kingdom, the Continent, and Mediterranean ports.

Under the arrangement as to sales in Europe, which has now been superseded, the board's committee in London received orders for individual brands of flour. These were cabled to the board in Australia, and an allowance was made to the millers for gristing, which gave a fair margin of profit. Some time ago the millers or a section of them, considered that they could do better with open market conditions, and the board left it with the flour interests of the different States to determine whether the agreement should continue or terminate.

SAVING POWER IN FEED GRINDING.

It has been the custom of most mills situated in the country districts to make some provision for grinding feed for their farmer customers. For many years this was usually done on some old wheat buhr that had been discarded and turned into a chopper, but few of them are now to be found.

When roller mills were introduced they put in two-high or three-high mills for feed grinding, but few of them are now sold and many of those that were in were discarded, and now most of the feed grinding is done on some form of attrition mill, of which there are many makes but practically but two patterns, the single head and the double head, each of which has its advocates. One thing about an attrition mill that caused them to supersede the others was their speed in grinding, and a man has no time to play if he attends to one properly, and no one has to wait long for his grinding unless caught behind other customers.



Attrition mills run hard and the question of plates is a vital and an expensive one. There are men with but one grinder who buy as many as five sets of plates at a time and they cost money. The plate wears dull on the forward or cutting side and the back parts of the ribs still stay sharp; of course the mill can be reversed, but that sometimes is quite a job, and then the other parts of the ribs run forward when it will for a time cut like a new plate.

The power taken by these mills is not inconsiderable. One manufacturer says to allow one horsepower for each 100 pounds ground per hour, but there have been instances where this was not obtained, even with ball bearing machines.

In the feed department of a certain mill there is a 24-inch ball bearing attrition mill. It is driven by two 15 h.p. motors mounted on the mill, so it is direct connected and does away with all belts.

It is a fact well known to many who use three phase motors that if you change the two outside feed wires so as to bring the one on the right post to the left one and the one on the left post to the right one the motor will run in the opposite direction and this is the way that feed mills run by motors are usually reversed, but on the mill referred to is an exceedingly clever arrangement for that purpose.

By referring to the sketch, there will be noticed the double throw two pole knife switch A, the center poles of which are designated as B and C. To these

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the two outside feed wires are connected, the center wire is carried direct to the motors; when the switch is in the position shown the current is carried through the bars of the switch from C to E and from B to D.

Now throw the switch to the position shown by the dotted lines and the current is carried from B to F and thence by the connecting wire to E, and the current is carried from C to G and K hence to D which causes both motors to rotate in opposite directions to what they did when the switch was in the first position.

To reverse the motors is the work of not over five seconds—and with what results? Simply this: The man who attends to the feed mill throws this switch every morning so each day the mill runs in the opposite direction to what it did the day before.

This switch may cost a few dollars to instal but soon pays for itself. But one switch is necessary when both motors run from the same starting box. The elevating machinery connected to the feed mill can be run by a separate motor so that the reversing gear in no way interferes with it. Grinding feed is not a pleasant task at best and anything that will improve it should be welcome to other millers in a similar situation.

CUTTING AND JOINING BELTS.

Human nature plays an important part in getting service and longer life out of a belt. It is human nature to do things in which seems the easiest way, not always realizing it is often the most expensive and usually the most laborious, because it necessitates doing the work over and over again. This applies particularly in the case of cutting belting and joining it.

Cutting the ends of a belt to put it into service seems such a simple thing that often the belt man does not give it the consideration necessary to insure the best results, and much of the difficulty with otherwise good belts is due to their not being cut and joined accurately. When one knows how, it is as easy to make a belt joint which will run the same as endless, as it is to do it by careless rule-of-thumb methods.

When a belt runs "wobbly" or races back and forth across the pulleys it is not giving its best service nor can it have its longest life. If you have a belt that is repeatedly jumping off the pulleys you are paying about twice as much as you should for it, because its life is being shortened and you are paying for power that is lost and production that you don't get. You are also repeatedly paying for unnecessary time and labor in fixing things up.

Can Run Straight as an Arrow

Provided that its ends are cut square and it is joined with care, a belt can be made to run as straight as an arrow if the pulleys are lined up true.

Don't guess at cutting your belt ends. Use a square—always—and use it with care. If you do not use a square, one or both of the ends will be cut unevenly or irregularly, which prevents smooth running. Even the use of a straight-edge does not assure the perfect results obtained by using a square, for the slip of a fraction of an inch will bring the belt ends together at an angle.

THE ARGENTINE MILLING INDUSTRY.

Buenos Aires. — The flour milling industry of Argentina ranks second after meat packing in value of annual production and is carried on by large mills equipped with modern improvements, their capacity being in fact greatly in excess of the quantity of flour produced, so that for economical working the industry needs either new export markets or greater consumption. During the year 1920 the quantity of wheat milled locally amounted to 1,344,439 tons, yielding 930,569 tons of flour and 391,584 tons of by-products. The quantity of maize flour produced amounted to 12,864 tons.

The following table shows the production, export, and home consumption of flour during the years 1918, 1919, and 1920:—

Year	Production Tons	Exportation Tons	Home Consumption Tons
1918 ..	1,081,269	176,445	904,824
1919 ..	1,071,863	328,107	743,756
1920 ..	930,569	170,191	760,378

During the 1909 to 1913 period 84½ per cent of Argentine exported flour went to Brazil, but this proportion fell during the 1916-1919 period to 59 per cent and in 1920 to the exceptional figure of 15.4 per cent.

QUOTATIONS ON BRAN AND SHORTS.

Montreal.—Members of the Canadian National Millers' Association have been advised by the Secretary of the Association that the following nominal quotations on bran and shorts have been reported to the United States Customs Authorities as the prices in effect on Friday, January 20th. These prices are the net cash prices in bulk f. o. b. the mill:

	BRAN	SHORTS
Montreal	$25.50	$27.50
Toronto	25.50	27.50
Port Colborne	21.00	23.00
Fort William	19.00	21.00
Keewatin	18.50	20.50
Winnipeg	14.00	16.00
Moose Jaw	14.00	16.00
Calgary	9.50	10.50

WOULD DIVIDE PROFITS BETWEEN GRAIN COMPANIES AND PRODUCERS.

Winnipeg. — Division of profits between grain companies and producers by means of participation certificates is urged on the Federal Government in a resolution to be presented to the provincial Legislature by Mr. J. Bernier, member for St. Boniface. The resolution asks also that mixing inferior grain with Canadian standard wheat be made a punishable offence.

The compelling of grain dealers to furnish annually to the Government full returns of grain handled, costs, and profits, with dockage, averages and screening reports is also requested. The resolution calls for the standard of grain to be determined by sample inspection on the basis of milling quality, as well as at present by weight and quantity of grain.

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CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

FLOUR SALESMEN—A large milling concern requires the services of experienced flour salesmen. Applicants must state experience and give credentials. Reply Box F 20, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

HEAD MILLER wants position. Now employed in 200 barrel mill. Full experience in modern mills. Active and intelligent. Reply Box 91, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED — By Head Miller, with 20 years practical experience in modern Canadian mills up to 4,000 barrels capacity. Can guarantee best results as to quality and yield on both hard and soft wheat, and maintain mill at highest point of efficiency. At present in charge of a 1,000 barrel plant. Reply Box 85, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

PRACTICAL MILLER with 23 years experience seeks position with plant having daily capacity of 250 barrels or upwards. Can furnish excellent references. Reply Box 82, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE — One six compartment, gas-heated Brown Duval Moisture Tester, practically new. Reply Box 101, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Head miller, with twenty years experience in 150 and 275 barrel mills, and still employed, is desirious of making a change. Applicant is 36 years of age, married, and can furnish excellent references. Reply Box 84, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

WESTERN CANADA MILL of 200 barrels capacity has a permanent position, starting immediately, for conscientious experienced miller, age between thirty and forty, who is capable of taking charge of plant. Give references and state wages required to Box 71, "Canadian Milling & Grain Journal," Dubrule Bldg., Montreal.

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WANTED.—Position as loading foreman by young man, twenty-eight years of age. Has had a number of years of general milling experience in mills of various capacities. Keenly interested in milling work and prepared to give best service. Reply Box 63, "Canadian Milling & Grain Journal," Dubrule Building, Montreal.

FLOUR SALESMAN wanted, to represent Ontario flour mill in Montreal. Must have experience and be able to furnish best of references and a bond. Must speak both languages. Reply, giving full particulars, Box F25, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FLOUR SALESMAN seeks position. Has splendid connection in Montreal and Quebec. Speaks French and English fluently. Prefers mill handling Manitoba wheat. Knows business thoroughly. Good credit man. Reply Box 90, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—Flour milling property in first class condition. Modern equipment. Good reasons for wishing to sell. Reply Box 83, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

FOR SALE.—New 50-Barrel Midget Flour Mill. Will sell cheap. Address Box F. 70, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

MANAGER WANTED—Modern flour mill in Ontario requires the services of a first class manager. Close knowledge of flour market a prime essential. One with record as a business getter will receive preferred consideration. State age and salary expected. Reply Box 87, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

STENOGRAPHER—A large flour milling company requires the services of an experienced stenographer, one with previous experience in the trade preferred. Reply Box F 21, "Canadian Milling & Grain Journal", Dubrule Building, Montreal, P.Q.

WANTED by competent miller, Flour Mill, 50 to 75 barrel capacity. Water power. Good condition. Good locality. Quebec or Ontario. Reply Box 79, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED—Best price on second-hand Midget Marvel Mill, also, terms, if any. Reply Box 93, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—First class mill, 130 to 140 barrel capacity. Good water power, equipped with modern machinery and doing a big local and shipping trade which goes with the business. Attractive terms will be given. Reply Box 94, Canadian Milling & Grain Journal, Dubrule Building, Montreal, P.Q.

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CANADIAN FLOUR AND RUSSIAN RELIEF.

New York.—The buying of first class flour by the American Administration Relief is the principal topic of interest in the local flour market. No official figures relative to the amounts purchased have been given out but various estimates range all the way from 150,000 to 200,000 barrels or even more. It was said on good authority that the demand was limited to the better grades of first clears and that the buyer had not paid over $4.50. It is declared that the buying has absorbed practically all of the better grades of first American clears available for prompt delivery and it is rumored that Secretary Hoover has been asked to give permission to purchase Canadian clears.

The Question Box

With a view to making this department one of real service, "Canadian Milling & Grain Journal" cordially invites its readers to send in their problems to The Question Box. There are but very few millers or elevator operators who do not have worries in the proper conduct of their plants. It may be due to lack of experience or inability to trace cause and effect. The logical and sensible thing to do is to ask someone who may possibly know. Often he is not at hand, and still oftener the perplexed miller or elevator operator does not want to show his lack of knowledge. Under these circumstances he can address his inquiry to the craft through this journal. His name will not be divulged if he wishes to remain incognito. Someone is sure to reply who has had similar problems to meet or similar questions to ask. We guarantee to devote all the space necessary to the asking and answering of questions, so do not be backward in sending them in.

THE EDITOR.

QUESTION.—How would you define the functions of a roll exhaust?—L.B.

ANSWER.—The primary object of roll exhaust is the removal of the heated air; not the removal of stock. However, with the removal of the air a portion of the roll's product is inevitably drawn into the fan, from which it is sent to a dust collector, to be returned to the flour and middlings streams, usually somewhere near the tail of the milling process. With a properly constructed system the amount of stock drawn into the fan is comparatively small. Contrary to general belief, it is not much higher in ash content than the whole product of the roll. Some milling tests recently made show the air-float from the first break to contain .398 ash when bolted through a 13XX, while that over the 13 and through an 8XX contained .416. The same stocks from the first middlings roll contained .418 and .426, respectively, while for the fourth break the results were .582 and .764. The flour produced by these reductions contained, for the first break, .512; for the first middlings, .344; and for the fourth break, .682. The flour bolted from the combined exhaust of all the rolls through 13XX contained .594 ash.

From the above data it might be inferred that, if the stock drawn out by the fan could have been left to bolt with the rest of the roll's product, the ash content of each stream would not have been materially changed.—C.N.

The Duster

A western miller went to the bank to get his note renewed.

"I am very sorry," said the manager, "but it will be absolutely impossible for me to renew your note."

The miller's face paled. After a moment of thought he looked up at the bank manager and said:

"Were you ever in the milling business?"

"No, never. Why?" answered the banker.

"Well, you're in it now," said the miller as he picked up his hat and went out.

A proposal has been made to Buxton (England) bakers to bake bread by mixing it with the waters from the mineral springs, which, it is suggested, would make a perfect diet for the gouty and rheumatic.—"Milling," Liverpool.

Great idea! If Montreal bakers went one better and mixed their dough with gin or Scotch, think of the export trade they could work up with, say, Toronto.

A man living near Montreal recently passed his 98th birthday without ever having seen an automobile. That explains why he lived to be 98.

The newest and one of the brightest stars in the firmament of nations—The Irish Free State.

Rufus Redd Dogg

"It seems t' me," exclaimed Rufus Redd Dogg with finality, "thet them 'ere railway and steamship fellers are, met-a-phori--cally speakin', goin' t' bust th' goose thet might one day be layin' golden eggs fer them ef they don't act with some sense o' fairness t' th' millers av th' country instead o' tryin' t' strangle them with rates on export flour shipments that gives 'em no chanct to go an' git furrin' business while th' goin' is good. I ain't sayin' that th' rates on flour is too high so much as I mean thet th' rates on grain is too low, an' th' millin' interests would be quite contented ef they wuz a rate on grain products thet ud give 'em a chanct to compete with grain shipments t' furrin' parts.

"Mebbe wan av these days when furrin' countries air' growin' their own wheat aplenty, an' won't want ourn, thank ye, th' steamer fellers will be beggin' fer flour fer ballast, never min' th' handlin' charges.

"Mebbe," concluded Rufus, "when th' National Association git after th' scalp o' th' Railway Commission et 'll do some good. Gol durn it, it ain't thet export rates worrit me a heap, but I hate like pizen to see any man handicapped by his own country into havin' t' pay a dollar for every ninety' cents worth of trade he does with a market thet shud be given' him a good profit. It ain't right whatever ways ye look at et."

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Small Combination Type removes oats, barley, cockle, wild peas, weed stems, and seeds all in one operation.

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CANADIAN
Milling & Grain
JOURNAL

VOL. III MONTREAL, FEBRUARY 15th, 1922 No. 2

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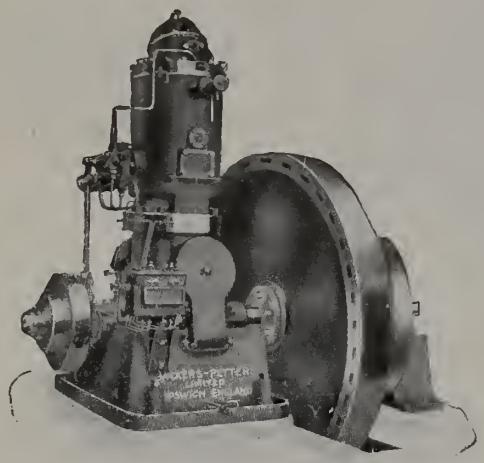

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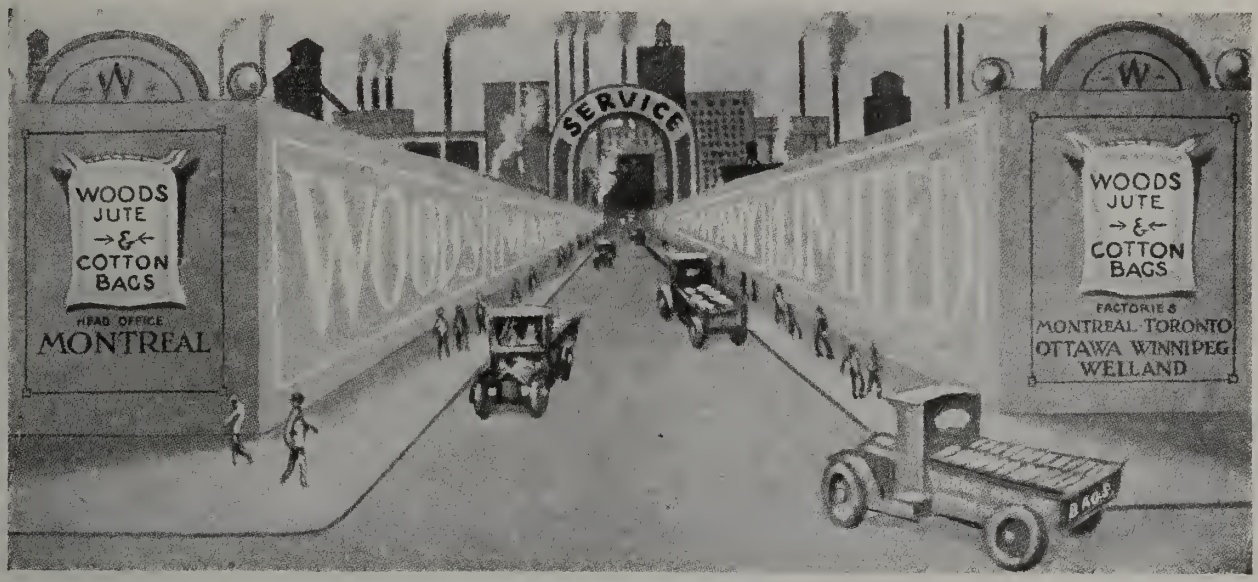

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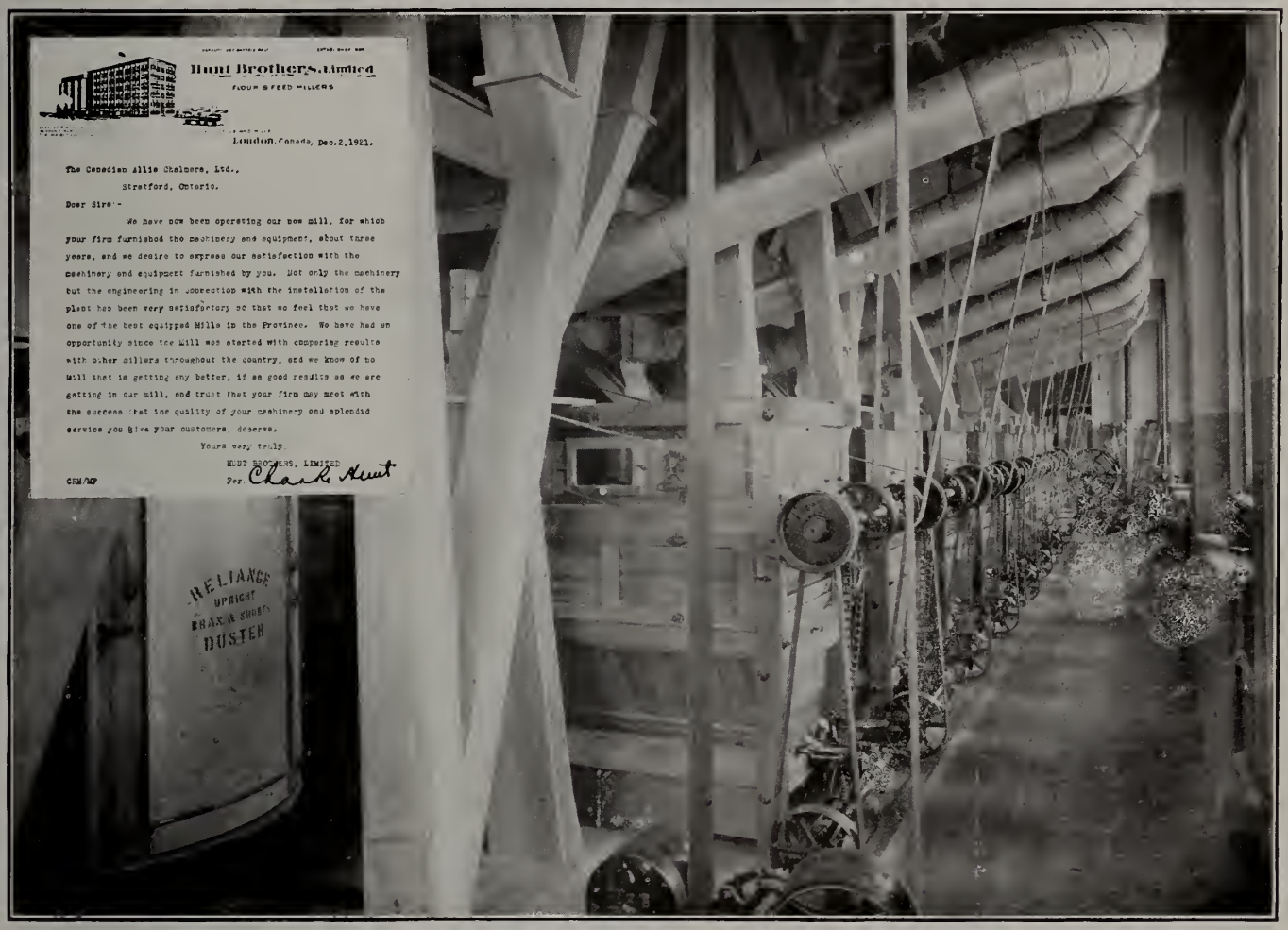
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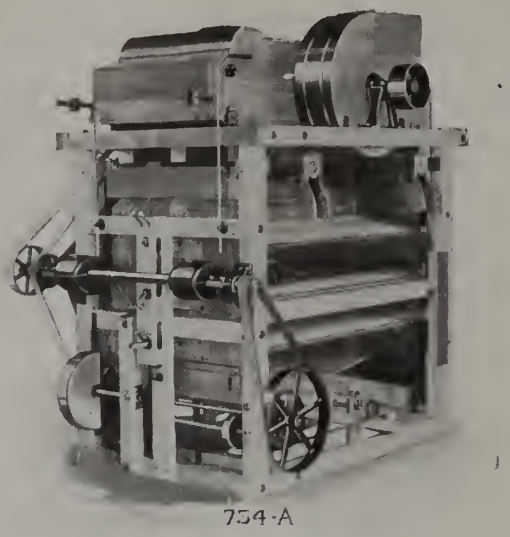
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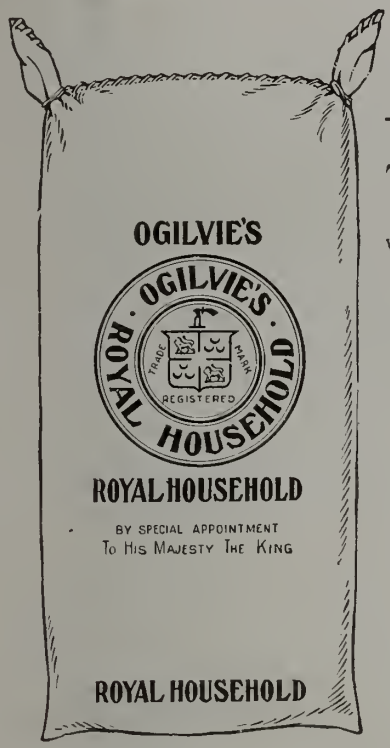

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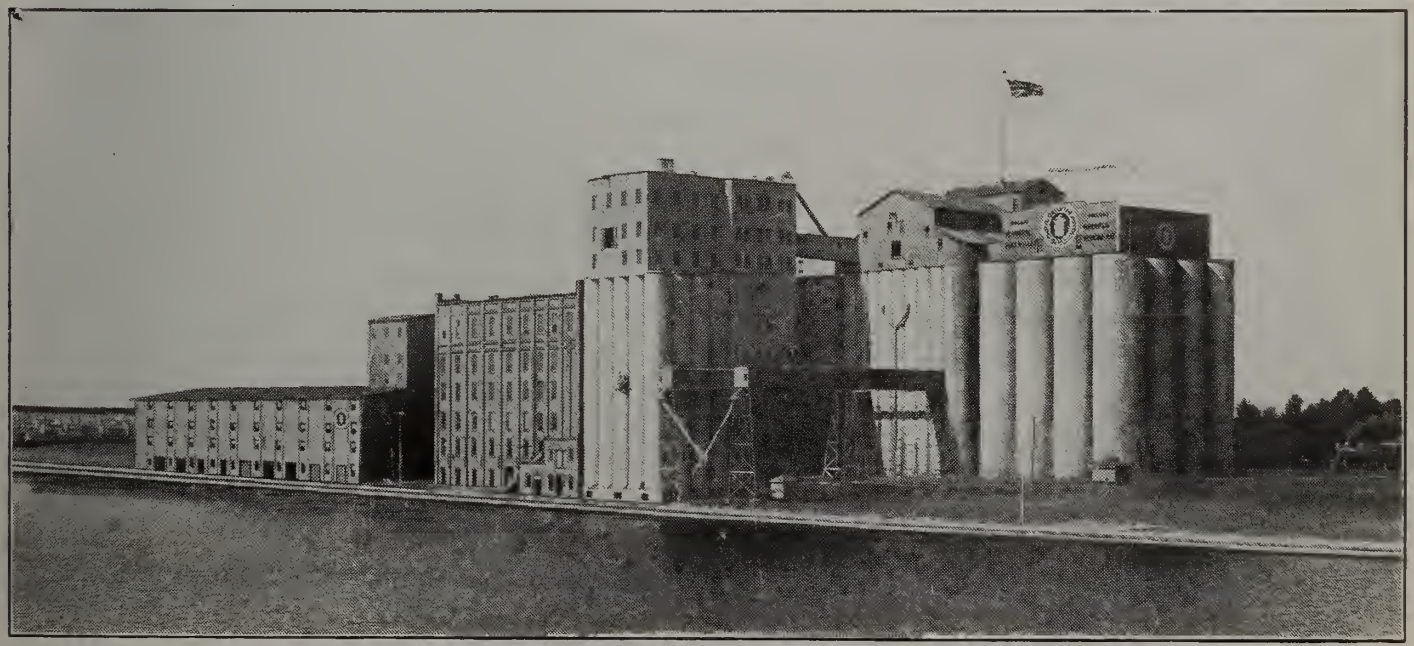

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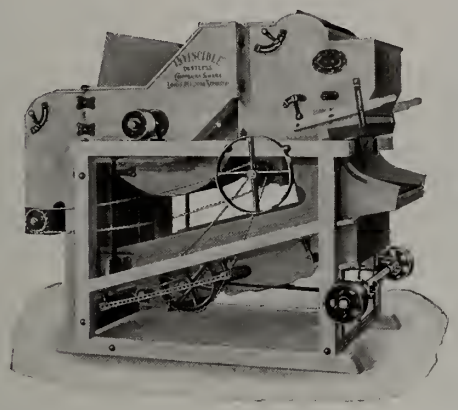

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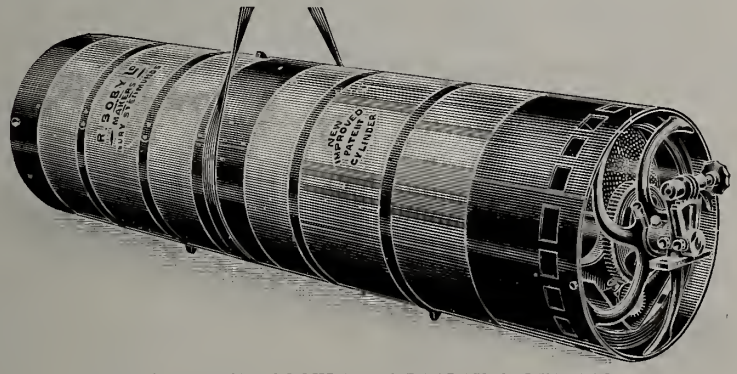

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VOL. III MONTREAL, FEBRUARY 15TH, 1922. No. 2

CANADA'S ONLY MILLING AND GRAIN PAPER

Mechanical Flour Handling Equipment Needed.

WHEN considering, as reported elsewhere in this issue of "Canadian Milling & Grain Journal," the request of the Montreal grain exporters for additional berthing accommodation, the Harbor Commission should remember that while many hundreds of thousands of dollars have been spent on grain handling equipment in the port not a cent has been used to directly facilitate the handling of Canadian flour for export. Just so long as this serious omission remains unremedied just so much longer will the country generally, but the live stock interests particularly, be deprived of the feedingstuffs which the increased milling of flour for export would make available.

American flour exporters, because of the mechanical flour handling equipment existing on both the Atlantic and Pacific coasts are steadily expanding their export trade to the detriment of the Canadian milling industry which, what between the excessive differential for flour as against export wheat shipments, high inland rail rates, absence of modern handling facilities at seaboard, and other difficulties, are not only being heavily handicapped in their efforts to retain export connections established at great expense through years of patient effort, but are threatened with the irrevocable loss of much of that trade.

The Harbor Commissioners programme of improvements for the coming season should most certainly make provision for facilitating the handling of flour for export from the port of Montreal, the lack of which has been a crying need these many years.

Permanent Success in Business.

MODERN business that has for its aim permanent success is based upon the idea of a fair exchange. The idea of getting something for nothing is obselete. Each individual and each organization stands upon the merit of that which he or it produces.

And that is not enough. Competition is keen. One must do just a little better than the other fellow in the same business. Competition sharpens one's wits, increases quantity and quality of production. If you are not beating the other fellow next to you in fair and honest competition it is time you began to do it, before you are forced to the wall.

Get busy. Find out what your weakness is and in what his strength lies. Go him one better. It is worth it, not only from the standpoint of increased business and profits but from the sheer joy of the battle.

Anticipate the Prosperity Ahead.

WITH business conditions showing every indication of getting back to a normal basis, there is probably not an elevator owner or operator in Canada who is not planning big things for the future. When clouds were darkest Canadian Milling & Grain Journal consistently preached the doctrine of optimism because it was convinced that better times were coming. The Better Times are almost here, and if elevator owners and operators want to increase their share of Prosperity it is essential that they start at once to put their houses in order, by replacing old worn-out and inefficient equipment and by carrying out needed improvements and enlargements which they postponed on account of the war. Improvement and expansion mean the more profitable and economical handling of business, and more money. And so far as bettering one's business is concerned "There is No Time like the Present."

An Inexplicable Attitude.

During the past few months of readjustment in practically all lines of industrial activity the attitude of the Canadian transportation interests towards manufacturers, millers particularly, in regard to the matter of rates is one not easy to understand. From an examination of the facts it would appear as though those responsible for the making of rates both inland and ocean had altogether lost sight of the fact that especially at a time when the revenue returns of transportation companies are at an extremely low ebb, it would be most distinctly to their interests to do all they possibly could to keep the mills running. Not only would this help the rail and steamship carriers but it would greatly encourage one of the basic industries of the country and result in general good for the community as a whole.

There cannot be any question that the present rates for flour shipments as compared with those for wheat constitute a serious handicap to the development of the milling industry, and why a discrimination of approximately 14 cents per barrel should be maintained by the Canadian railways against flour shipments when the United States railways appreciating the desirability of encouraging the American flour export business are giving a rate from Buffalo to seaboard which is some 3½

cents per 100 pounds lower than the Canadian railways feel justified in giving, is a matter demanding immediate attention.

Another unfortunate feature of the situation is that Canadian shippers cannot take advantage of the cheaper rates prevailing in the United States and it is said that this is one reason why the Canadian railways are maintaining such an independent attitude in consistently refusing to consider a revision of their rates on export flour shipments.

The same discrimination is practised by the steamship companies. United States millers enjoy a 19 cents per 100 pounds rate to the United Kingdom, while Canadian millers who help to make the business which makes it profitable for British owned steamship companies to do business with Montreal are compelled to pay 24 cents per 100 pounds.

Seized with the seriousness of the situation which if not remedied threatens to paralyze if not kill altogether the efforts of the Canadian milling industry to strengthen its present export connections and at the same time to secure additional export business, the Canadian National Millers' Association is preparing to go before the Railway Commission with a demand that in the interests of an industry with whose prosperity and well being that of the country is most closely allied, an order shall be issued requiring all railways operating in Canada under the jurisdiction of the Board to establish on grain products a rate that will enable millers to compete with grain export business.

The National Association has already presented its case to the steamship companies with regard to ocean rates and unless some remedial action is immediately instituted by the ocean carriers it is quite possible that their refusal to recognize the justice of the millers demands will mean serious loss for themselves. One thing is certain and that is that in these days of competition of the closest kind Canadian millers cannot pocket losses indefinitely in order to maintain their hold on hard won export markets.

Legitimate Grain Speculation.

It's the business of the farmer to raise the grain, its the business of the grain dealer to receive, clean and market the grain; it's the business of the miller to grind the grain, and it's the function of the speculator to buy the surplusage of the grain produced in this country as a speculation, and any farmer, grain dealer, miller, artisan or professional who attempts to reap a livelihood from fluctuating grain prices is a quack speculator, of the worst kind.

There isn't the least doubt that there is such a thing as legitimate grain speculation and that it has its place. Public criticism of it is produced by two things—the occasional manipulation of the market by men of great wealth and the frequent ruination of small men by gambling on exchange quotations. If these two features can be eliminated, opposition to the exchange would cease.

Grain speculation is much easier for the inexperienced men of small means. Under pre-war conditions a clerk with ten or twenty dollars could speculate in grain, and thousands of small fry did speculate in grain, when they would be unable to speculate in anything else. Of course, the exchange does not recognize such trading, but it exists and it could not exist without exchange quotations.

If the exchange could eliminate the bucketshop and accept the trades only of men of known financial ability and knowledge of the business, there would be no complaint on moral grounds. The chances are that this ideal condition would solve the problem of manipulation also.

Nobody expects the grain exchanges to produce any such ideal state of affairs, but they can do a great deal to reduce common gambling on the prices of farm products to a minimum. This thing of merchants, lawyers and doctors dabbling in grain is not legitimate business in any sense. For a miller who owns a large stock of cash grain to protect himself from loss through an exchange transaction is legitimate, provided he trades purely for protection. In many instances not to do this becomes an enormous gamble.

The grain exchange is for the convenience of grain men, and to facilitate the function and distribution of grain, and the more nearly its transactions are limited to that class the less chance there will be of interference from the outside.

Progressing Under Difficulties.

THERE are some who aver that the Canadian milling industry during the last few months has been passing through a period that has been more trying than any with which it has ever been confronted.

There are others who are able to go farther back in milling history who tell us that in the past the milling industry faced periods which were far more severe than any recent occurrences.

The milling industry, itself, has, however, emerged from every trying period with colors flying; and those who can recall experiences of the past are noting the signs which in previous times were the forerunners of improved conditions.

These signs indicate an improvement in conditions. The general tone among the milling fraternity is more cheerful. Millers who have kept their plants in order are having no difficulty in financing their operations and securing funds at satisfactory rates of interest. The new year holds forth good prospects, which will be available to the active, intelligent merchandiser, but so far as export prospects are concerned Canadian millers will never be able to realize their possibilities to the full unless those glaring discriminations which exist in regard to the lack of mechanical flour handling facilities at seaboard and in the matter of rail and ocean rates remain as they are at present.

Millers are not seeking to fix prices. They understand better than outsiders the futility of endeavoring to establish prices in a field like flour milling where the raw material is of varied character, the manufacturing units widely different and the products to be disposed of not of uniform character or quality. Yet millers would like the privilege of closer association without the fear of prosecution for seeking to restrain trade and without having the exchange of price information construed as a possible violation of law.

EASTERN PROVINCES

MONTREAL

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MONTREAL FEBRUARY 15TH, 1922

THE MONTREAL MARKETS

Flour.—The feature of the flour market continues to be the steady increasing demand from United Kingdom buyers for spring wheat grades, and as the prices being bid show a steady improvement in most cases in sympathy with the continued strength in wheat here, a good business is being done, and the market in this respect has been fairly active. New York wired recently that the market for flour was very nervous and excited over the action of wheat, but while prices were advanced buyers were still timid about making purchases, while on the other hand there was a good business being done in first clears, including sales of 15,000 barrels for early export account.

Owing to the continued strength in the Winnipeg wheat market and the steady upward tendency of prices of late, there has been a much firmer feeling in the local market for spring wheat flour, but no actual changes in prices have as yet been announced. The demand from local and country buyers for supplies shows a decided improvement, and the market has been more active with a larger volume of business in car lots of first patents at $7.50, second patents at $7, and strong bakers at $6.80 per barrel in jute bags, ex-track, less 10c. per barrel for spot cash.

There has been no further developments in the market for winter wheat flour, prices being firm under a steady improving demand for supplies to meet immediate requirements.

Millfeed.—The condition of the market for millfeed remains unchanged, prices being maintained with a good trade passing in most lines, and sales of car lots of Manitoba bran being made at $32.50, and shorts at $33 per ton, including bags, ex-track, while broken lots of bran in mixed car orders are quoted at $28.25, shorts at $30.25, and middlings at $32.25 per ton, including bags, less 25c. per ton for spot cash, and pure barley meal at $38 to $40, pure grain moullie at $38, and feed cornmeal at $35 per ton, including bags, delivered. A fair trade is being done in rolled oats, and the tone of the market is steady with sales of standard grades at $2.70 to $2.80 per bag of 90 lbs.

Baled Hay.—A steady trade continues to be done in baled hay, and the market has been moderately active with a firm undertone. Sales of car lots of good No. 2 timothy are being made at $28 to $29, No. 3 timothy at $26 to $27, and clover and clover mixed hay at $24 to $25 per ton, ex-track.

Grain.—The export trade in Manitoba spring wheat has been very active of late, there having been a decided increase in the demand from the United Kingdom for supplies, and as cables were strong at a further advance in prices of 6d. to 1s. per quarter in some instances a large volume of business resulted for immediate shipment, while it was reported that some sales were also made for March delivery. There has been an improved demand from foreign buyers for oats and barley, and as the prices in some cases were firmer than they have been of late more of the orders coming forward were accepted. In addition to the above, New York exporters were in this market lately for No. 3 northern wheat, and sales of some round lots were made at f.o.b. prices West St. John. New York wired recently that there was a good demand for grain in that market from over the cable, and reported sales of 700,000 to 1,000,000 bushels of wheat, principally Manitoba grades; 500,000 bushels of American corn, and a cargo of rye.

MONTREAL GRAIN EXPORTERS TO URGE INCREASED BERTHING ACCOMMODATION.

Montreal. — A strong delegation of Montreal grain exporters will shortly approach the newly-appointed Harbor Commissioners to urge upon them the inadequacy of the present berthing facilities in the Port of Montreal and the serious loss which the city and province will incur if every effort is not put forward to meet the situation.

Last season Chicago exporters found the St. Lawrence route so much cheaper than the railway haul to New York that an unprecedented amount of corn and grain passed through this port. Unfortunately, the berthing facilities proved so inadequate that at one time there were forty vessels waiting for cargoes and only berths for eighteen. The others were held up at a costly charge of from $1,000 to $600 a day till there was room for them. This made American grain growers regret that they had chosen the St. Lawrence route, as it proved more costly in the end. What is wanted is more berths with grain loading facilities, if Montreal is to continue to compete with New York successfully, it is declared.

Another problem is the allotment of the berths which already exist. Last summer the shipping companies had already been allotted all the berths when the unexpected rush of western American grain came. Consequently certain vessels which carried very little grain were occupying berths with first-class grain loading facilities that were badly wanted for other vessels which were piling up heavy expenses while they waited.

There is every reason to believe, according to the opinion of a prominent railroad official of this city, that the rush of American grain will continue and will utilize to the full every elevator and other facility which Montreal can build to cater for it. The water route remains the cheaper route, no matter what the American railroads do to undercut it, and this ensures a great future for the port and city, he said.

C.N.M.A. ASKS FOR SUSPENSION OF CHARGES FOR OUT OF LINE HAULS

Montreal.—The Canadian National Millers' Association has applied to the Dominion Board of Railway Commissioners for an order (under Sections 314-316 and Sections 328-332 of the Railway Act) directing the Canadian Pacific Railway, Canadian National Railways, Grand Trunk Railway, and all other railroads under the jurisdiction of the Board, to suspend the tariffs or supplements to tariffs is-

sued in accordance with the general order of the Board No. 354, January 4th, 1922, with respect only to the sections incorporated in these tariffs covering charges for out of line haul to milling points east of Fort William, Port Arthur, Westfort and Armstrong, particularly for shipment all rail and state:

1. That the increases in rates for out of line haul are entirely unreasonable.
2. That the increased rates as published in the tariffs mentioned are an undue disadvantage against the Ontario miller.
3. That these increases more than counteract the spirit and intent of the general order of the Board No. 354, January 4th, 1922.

REPORT SOVIET RUSSIA IS IN MARKET FOR 3,000,000 BU. OF CANADIAN WHEAT.

Montreal.—It is rumored by prominent local grain brokers that Russia is once more in the market for three million bushels of Canadian wheat. This coming on top of the large Soviet order of a short time ago has caused quite a flurry in local grain circles. Immediate delivery is not required, as this grain will be used entirely for seeding purposes. For this reason it is thought that there will be a large movement of Canadian grain towards the East in the near future. At the present time the only large blocks of Canadian wheat are stored in Buffalo and Fort William. The movement will affect Montreal very little, as there are less than a million bushels of wheat stored here at the present moment.

It is expected in some quarters that the grain export business will become quite brisk some time next month, owing to the reports that the Greek Government will again be in the market for a large block of Canadian wheat. Unless this happens there is very little likelihood of any business in Montreal outside of the local orders, before spring.

During the close of navigation all grain in the Montreal elevators is stored free of charge, therefore, grain companies are anxious to leave their holdings here as long as possible, and unless they are sure of an immediate sale they will not ship anything to the winter ports.

Total exports of wheat from Montreal, so far this year amount to about half a million bushels, and the elevator staffs are chiefly occupied in making repairs to the machinery so that they will be better able to look after the large trade that is expected in the near future.

TRADE OPPORTUNITIES

With a view to assisting the Canadian milling trade in the development of a permanent and profitable export business, "Canadian Milling & Grain Journal" publishes in each issue a selected list of trade opportunities, the investigation of which should prove of value. "Canadian Milling & Grain Journal" is taking special pains to ascertain the reliability of each opportunity presenteda nd will gladly furnish any further information regarding them that may be desired.

THE EDITOR.

No. 226.—Mr. M. Jameson, 100 Rue Dragon, Marseilles, France, wishes to get in touch with Canadian exporters of flour and cereal products.

No. 227.—Mr. R. Lopez, P.O. 1667, Havana, Cuba, is anxious to establish connections with Canadian exporters of wheat flour.

No. 228.—Messrs. Moorhead Sons & Company, 104 Brunswick Street, Glasgow, Scotland, which has distributing branches and agencies in the principal centres of the United Kingdom, can handle consignments from Canadian exporters. Flour, oatmeal, and cereal foods, particularly required.

No. 229.—Messrs. C-Morris Broc., 89th Avenue, Milcanps, Brussels, Belgium, would like to receive quotations for barley, oats, corn, and by-products of corn, from Canadian exporters.

No. 230.—Mr. John Boom, Room 37, Curacao, Dutch West Indies, desires to reach Canadian firms manufacturing and exporting flour and cornmeal.

No. 231.—Mr. T. M. W. Deane, Bridgetown, Barbados, British West Indies, who is well-known in the trade, and who can furnish excellent bank references, wishes to secure a Canadian connection for general feed-stuffs, including oats, hay, bran, pollard and middlings.

The following officers for the Montreal Corn Exchange Association were elected by acclamation, there being only the requisite number of nominations required for each office when the nominations were closed recently. President, Mr. Howard D. Strachan; treasurer, Mr. T. H. Reeves; committee of management, Messrs. A. Geo. Burton, W. J. McAuley, A. E. Clare, J. A. Marshall, F. A. Heywood, Norman C. Stuart, E. Turgeon; board of review, Messrs. Jas. Carruthers, chairman; H. D. Dwyer, H. W. Raphael, A. P. Stuart, Adam G. Thomson, Norman Wight.

THE CHICAGO MARKETS

The following table compiled from figures furnished by Messrs. Bryant, Isard & Co., members of the Toronto Stock Exchange and the Chicago Board of Trade, 84-90 St. Francois Xavier Street, Montreal, show highest price levels recorded on Chicago Board of Trade, from January 27, 1922, to February 11, 1922, inclusive.

	Jan. 27	Jan. 28	Jan. 30	Jan. 31	Feb. 1	Feb. 2	Feb. 3	Feb. 4	Feb. 6	Feb. 7	Feb. 8	Feb. 9	Feb. 10	Feb. 11
May Wheat.....	1.16½	1.18⅞	1.19⅞	1.19⅞	1.19½	1.23⅛	1.26¼	1.25½	1.28¾	1.30⅝	1.31⅜	1.31⅝	1.32½	1.33⅞
July Wheat.....	1.02⅞	1.04⅝	1.05⅝	1.05	1.05¾	1.07⅝	1.09½	1.08⅞	1.11⅛	1.12⅝	1.16¾	1.18½	1.18⅜	1.18⅝
May Corn.....	0.53⅝	0.54½	0.54½	0.54⅛	0.54¼	0.54⅝	0.55⅜	0.55⅜	0.56⅛	0.59¼	0.59⅛	0.59	0.59¾	0.59⅝
July Corn.....	0.55¼	0.56⅜	0.56⅛	0.56	0.56	0.56⅝	0.57½	0.58⅝	0.61	0.61⅞	0.61⅛	0.61⅜	0.61¼	0.62
May Oats.....	0.39⅛	0.39⅝	0.39⅝	0.39⅛	0.39	0.39⅜	0.39⅝	0.39⅝	0.40¾	0.40⅞	0.40⅝	0.40⅝	0.40¾	0.40¾
July Oats.....	0.40⅛	0.41½	0.50⅝	0.40¼	0.40	0.40⅜	0.40¾	0.40¾	0.41⅛	0.42¾	0.42	0.42⅛	0.42¼	0.42¼
May Rye.....	0.86¾	0.87⅛	0.89¾	0.89½	0.89	0.91⅝	0.92⅞	0.92¾	0.94	0.95½	0.95¾	0.98½	1.01⅜	1.01½
July Rye.....	0.78½	0.78⅝	0.81½	0.80¾	0.78	0.81	0.82	0.81⅞	0.84	0.85	0.86	0.89¼	0.92	0.92¼
July Rye.....	0.78½	0.78⅝	0.81½	0.80¾	0.78	0.81	0.82	0.81⅞	0.84	0.85	0.86	0.89¼	0.92	0.92¼
May Barley.....	0.58⅝	0.58⅞	0.59¼	0.70	0.60	0.57	0.59	0.58⅞	0.61	0.61	0.61	0.61	0.61	0.61⅛

ONTARIO

TORONTO

TORONTO FEBRUARY 15TH, 1922

THE TORONTO MARKETS.

Flour.—The recent advance of ten cents in wheat, which is equivalent to 50 cents a barrel in flour, has not at writing affected the domestic price of flour. The demand has improved somewhat for domestic but there is no big buying and few firms are contracting for supplies. There is, however, an increased demand for export flour, the price having advanced from two to three shillings per 280 lb. sack during the past ten days. The Canadian Flour Export Company report a very satisfactory volume of business to United Kingdom points and to all their other connections, considerable quantities of flour having been disposed of. There has been a fair amount of business done in wheat which has had its reflection in the flour market. And this is where freight considerations enter. It is pointed out that wheat can be shipped to United Kingdom points at nine cents per one hundred pounds less than it takes to carry flour. The prevailing quotations for Manitoba straight grade flour, second patents run at from 41 shillings and 6 pence, to 42 shillings and 6 pence. There is little doing in Ontario flour as the prices are too high. Straight car lots of straight grade Ontario flour are quoted at $5.40 to $5.50, bags included.

Rolled Oats.—The past two weeks witnessed a big drop in the rolled oats market, reductions representing from twenty-five to thirty-five cents as compared with the quotations of a couple of weeks ago. Prevailing quotations are from $2.45 per bag up to $2.85. This is despite the fact that the price should be higher than before the drop on account of the advance in oats. There has been a lot of price cutting amongst various firms which has had a bad effect on the market.

Corn.—A recent advance of about four cents a bushel has been the chief character of the corn market of late. The market has eased off a little but is still showing strength and it is anticipated that it will hold fairly firm. No. 2 yellow corn is now quoted at 68 cents, Toronto.

Grain.—A decrease in both the Canadian and United States visible supply of wheat has given an impetus to the forward movement of the wheat market and values have been soaring sharply. Reports of export trade are in circulation and Winnipeg wires have reported to Toronto that export houses there were buying freely. On the Toronto market No. 1 Northern wheat advanced recently to $1.41¼. Offerings of cash grains are showing up a little stronger. There has been a strong apparent movement by speculators from which it would appear that there is a good chance of the market being in for a sustained advance. As far as the local market goes, however, there is not a great deal of life apparent. Local millers are unwilling to take on supplies of cash wheat at the present levels, the belief existing that a reaction may set in. Ontario wheat is fairly firm in sympathy with Manitoba, and both corn and oats are in fair demand.

Millfeeds.—There is a rather slow demand for the heavier feeds, such as feed flour, owing to the demand for corn which is to some extent taking the place of feed flour, but the recent stiffening in the wheat market, combined with the improvement in sterling exchange will, it is thought, bring a good volume of export trade into this market. There will, however, have to be considerable export business to overcome the shortage in the domestic market. There is a fair demand for shorts and a very keen demand for bran. Bran is now quoted at $28.85; shorts at $30.25; white middlings at 35.00, and feed flour at $1.80, car lots. Straight cars are being sold at $31.00, and premiums are still being offered for straight cars of bran.

Oil Meal.—There has been but little change in the oil meal market although, generally speaking, it is holding its own and should strengthen considerably if, as expected, it follows the wheat market. Local dealers report the demand as not being particularly strong. Canadian oil meal is quoted at $52 to $54, and the American product at around $54 to $55, Toronto.

MAKING STOCK FEED FROM SCREENINGS

Fort William.—Stock feed manufactured from ground standard re-cleaned grain screenings, is being shipped in carload lots by the Sellers Grain Company and the Ogilvie Flour Mills Co. to outside points. Several carloads of the product are being shipped daily to the Government of the Province of Quebec for distribution among farmers and stock raisers, and recently the Sellers Company shipped a carload to the Manitoba Government Experimental Farm at Brandon, Manitoba.

Standard re-cleaned grain screenings contains twelve per cent. protein, three and a half per cent. fat, and not more than ten per cent. fibre, and is composed of wild buckwheat, oats, wild oats, barley, broken wheat and flax, and not more than one per cent. of mustard and other weed seeds. When ground all possibility of the germination of any such seeds under the most favorable circumstances, is eliminated, and an excellent feed for mature stock is produced.

GROWING GRAINS IN COMBINATION

Toronto.—Addressing the American Association for the Advancement of Science in Toronto, Dr. C. A. Zavitz, of the Ontario Agricultural College, Guelph, who took for his subject, "Grain Grown in Combination for Grain Production", stated that the greatest areas in 1921 in crop production in Ontario were used for the growing of oats, fall wheat, mixed grains, barley, husking corn, spring wheat, buckwheat, rye, peas and beans in the order given—61,289 acres were used for mixed grains in the past season, this acreage being almost equal to that used for the growing of winter wheat. It will, therefore, be seen, he said, that the growing of grains in definite combinations is occupying an important place in crop production in the Province of Ontario. A table read by Dr. Zavitz showed that a mixture of barley and oats came at the top of the list in the production of grain.

SAYS CANADA IMPORTS MUCH SEED THAT COULD BE CULTIVATED HERE.

Mr. Geo. H. Clark, Dominion Seed Commissioner, Ottawa, who recently attended the International Seed Control Conference at Copenhagen, secured during his visit some facts of value to Canadian seed growers. He is of opinion that this country imports much seed that might well be produced in Canada, and that the exports of Canadian red clover seed might be doubled and trebled many times with profit, both soil and climate being ideal for its production. European seed experts, he says, recognize Canadian alsike, red clover, and timothy seeds as the cleanest and best that the world produces. Alsike clover, however, is not popular in Europe. Some of the statements made by Mr. Clark as the result of his observations are:—

That Canada imports orchard grass (Dactylis) seed when we can produce a better quality ourselves, that grown in the clay belt of Northern Ontario, being unsurpassed in quality.

That if Canadian farmers would produce seed of orchard grass and timothy, they are assured of a good market for substantial quantities at prices more remunerative than can at present be secured for oats.

That ideal conditions exist in Alberta, Northern Ontario and Quebec for the production of far better white clover seed than can be imported. A supply of wild white clover seed has been ordered from Scotland wherewith to establish a seed-producing centre at Kapuskasing in the clay belt of Northern Ontario.

Field root and garden seed production in Canada is progressing, he believes. Much of this seed has hitherto been imported from Denmark at unusually low prices owing to over-production there. The production area of these seeds has, however, owing to past losses, been reduced to one-third of normal, and Canada's opportunities are thereby greatly increased.

Mr. Clark was much impressed by the thrift and economy practised on Scandinavian farms.

VANCOUVER NEEDS MORE ELEVATORS TO HANDLE EXPANDING GRAIN TRADE

Edmonton.—Every available wharf at the port of Vancouver is berthing an oversea vessel loading wheat from the western prairies, says an Edmontonian just returned from the coast. Many steamers are lying out in the stream awaiting an opportunity to get into place beside the elevators and it is apparent that much of the grain traffic which formerly went via the eastern ports is now being diverted to Vancouver to be routed via the Panama canal.

Vancouverites claim that railway transportation via the Rockies is far cheaper than the long haul to the east; the mountain grades are offset by the distance to the east, while the steamer haul cuts the cost of handling the grain in Europe.

In general, financial men at the Pacific Coast port are in an optimistic frame of mind, but they recognize that Vancouver must construct more docks and elevators to handle the grain from the prairies as the present congestion is bad both for the city and the shipping companies.

The Modern Sophocles

Ours is a wonderful world, but it is ours now. The present day is our day, the present deeds are our deeds. The habit of putting our best into everything we do will produce our maximum efficiency and will help us to get the best possible to be had in skill, training, shrewdness, acumen, and power.

It is not the salary one gets that makes him a success in life, but it is the use of the opportunity he finds in his work, to become a business builder and a success winner in the race of life.

Resolve, then, that you will call upon all of your resourcefulness, your inventiveness, your ingenuity, to devise new and better ways of doing things, that you will enter into your work with a spirit of enthusiasm and zest that knows no bounds, that you will be more progressive and up-to-date in the performance of every duty—that you now realize it is not where you are, but what you are that counts.

Ottawa.—The Dominion Bureau of Statistics reports that the first Indian wheat forecast of the season places the area sown to wheat in India for the year 1921-22 at 27,739,000 acres. This compares with 25,722,000 acres, the finally reported area for 1920-21, and with 32,142,000 acres, the average for the five-year period 1915-19. As compared with 1920-21, the area represents, therefore, an increase of 2,017,000 acres or 8 p.c., and as compared with the average a decrease of 3,403,000 acres or 12 p.c.

USING SCREENINGS FOR FUEL.

Port Arthur, Ont.—The use of elevator screenings, which consist of straw and weeds, for fuel is being generally practiced in the business blocks of the city. Since the ruling of the board of health that no more screenings should be dumped into the waters of the bay, the elevators have been hard put to find an outlet for the ever-increasing surplus. The Whalen building, one of the largest in the city, is now being entirely heated from screenings fuel. The fuel expense has been cut in half.

The Y. M. C. A. is saving $200 a month. Other buildings are reporting immense savings.

FOR SALE

To close an estate, the following used milling equipment: one 4 foot French Burr wheat stone, for cornmeal or Graham flour; one Eureka Perfection milling separator, 25 bus. capacity; one Hagenmacher Plansifter; one Beall wheat polisher No. 1; one cylinder cockle machine, 25 bush. capacity; one cornmeal purifier; one power bran packer No. 7, style C, Goldie & McCulloch; one Eureka separator and double scourer, Howes Co., 25 bus. capacity; two Greey flour packers; water wheels, etc. This machinery must be disposed of at once, and may be seen at Cornwall, Ont., by applying to Mr. H. W. Snetsinger, Box 760, Cornwall.

WESTERN PROVINCES

WINNIPEG

WINNIPEG FEBRUARY 15TH. 1922

THE WINNIPEG MARKETS

Flour.—Probably the outstanding feature of the western flour trade is the steadiness with which prices have held since January 1st, as there has been no change of an official character since the first of the New Year. While there are rumors to the effect that a few mills have indulged in a little cutting of prices in order to stimulate business where it was quiet, it is understood that these decreased prices were only for small lots and did not last beyond a few local sales, and had little bearing on the trade in general.

This firmness in flour prices and a rising wheat market does not appear to have instigated new buying and, generally speaking the situation remains unchanged. The domestic trade continues good and millers report a persistent demand, and that the call for immediate or prompt shipment stuff is continuous. Since stocks all around have been kept at a minimum, it is inevitable that a certain amount of replenishment must take place right along. One pleasing factor is that the large milling companies have managed to dispose of practically all their clears and low grades at satisfactory prices, which have been sold in large blocks to over-sea relief or from western storage.

Millers, generally, report business as fair and satisfactory. Some mills throughout the West are running to capacity, but on an average they are running from 65 to 70 per cent. of capacity. Export trade appears dull, although many fair-sized orders are being received from the head offices in Eastern Canada of Western mills, but it is difficult to tag these for export or for Eastern Canadian trade.

Present prices are quoted as follows: First patent spring wheat flour $7.00 per bbl., second patents $6.40, first clears $5.80, in jute bags, straight or mixed cars, delivered at any point between Fort William and the western boundary of Manitoba. Saskatchewan points take 10c. under these prices, and from Eastern Alberta to the Pacific Coast values rise progressively to $7.30 for first patents at Vancouver and like points.

Millfeed.—The demand for bran and shorts continues exceptionally strong and stocks on hand are not heavy. Mills find little trouble in selling all they are making. Most of the business now being done is with local buyers, as very little feed is going east. Better prices could be secured in the East but millers are giving prairie and Pacific Coast customers a preference in booking sales. Prices remain firm but unchanged at $19 per ton for bran and $21 for shorts, in jute bags, straight or mixed cars, delivered, Winnipeg territory. Some mills report sales of flour middlings for shipment east at equal to $27 per ton here.

Oatmeal.—Demand steady. Domestic buyers are taking fair quantities, but no sales are being made for export, and prices remain unchanged. Rolled oats are quoted at $2.50 to $2.75 in 80-lb. bags, and oatmeal at $3 to $3.25 per 98-lb. bag, delivered, Winnipeg territory.

Rye Products.—While the demand is not keen a fair volume of trade is passing and the local mill is running steadily. Present quotations are: Best patent flour, $6.50 bbl., in 98-lb. bags; medium, $5.50; dark $4; rye meal, $4, delivered, Winnipeg territory.

THE GRAIN MARKETS

The first week of February saw the best bull market that has occurred in grain since first the heavy declines took place. During the last week in January the change was gradually coming about, the effects of the serious financial scare in Chicago having pretty well worn off, and the undoubted firmness of the surrounding factors began to have their effect on prices. Then, as we entered the new month and it was realized that supplies were steadily slipping away, with export demand enlarging, and foreign demand getting stronger, a buying movement set in which has driven May wheat to the highest points struck since early fall.

Premiums on wheat have declined to some extent in the face of the rapid rise in futures as the demand has not always kept pace with the increased prices, while the standing orders to sell at various levels have uncovered fairly heavy offerings from day to day. However, it can be said that the buying, both of milling and exporting interests has been well sustained and in the aggregate has lifted a good part of the heavy supplies which have been pressing so hard on the market since the movement of the crop first became heavy in fall. Milling business has been steady and improving and buying from this source has been a factor of no small importance in the market, particularly as the American markets all report an improved milling demand for the best grades of wheat.

In the coarse grains there has been a steady movement of oats to Eastern Canada, where the hot weather of last summer did much damage to the oats crop. The best grades are in demand for seed and the poorer ones for seed in both Quebec and Ontario, and it is said that enquiries for seed oats are coming in from the Northern States, where the oats crop is known to have yielded very light grain. The strength in corn at Chicago has helped the feed grains also.

Trade in barley is very light, as offerings are scarce, but values are well maintained.

GRAIN RATES FAVOR PACIFIC COAST.

Calgary, Alta.—Owing to the number of ocean bottoms available on the Pacific, and with local milling and Oriental demand, there is a premium of from six to eight cents over Fort William spot prices and about three or four cents Fort William cash price for wheat shipped to Vancouver for shipment via the Panama canal and the Orient.

Though there is a fairly large volume of grain going west, the facilities are to a certain extent limited, and the shipments are controlled by the orders sent in from Vancouver.

The prices are, of course, based upon the prevailing Fort William price and the freight rates from Alberta points.

MINISTER OF RAILWAYS WOULD ASSIST DEVELOPMENT OF MILLING INDUSTRY

Winnipeg.—Freight rates pertaining to carrying of grain upon the Canadian National Railways will be reduced to a point to make it attractive for western shippers to send their grain to Fort William rather than to Vancouver for export, was the statement made by Hon. W. C. Kennedy, Minister of Railways, who, with D. B. Hanna and other officials of the Government road, is now in the West. Under present conditions high rates on grain make it cheaper for shippers at Calgary to export via the Pacific Coast than by Fort William and the Atlantic seaboard.

Hon. Mr. Kennedy, also an advocate of centralized effort in the milling industry, stated that the Government Railways would encourage development of the milling industry here so grain could be converted into flour with minimum of handling and expense involved.

MARQUIS WHEAT GAVE BEST RESULTS.

Lacombe, Alta.—Of 23 varieties of Spring wheat tested at the Lacombe Experimental Station last year, six were considered worthy of particular mention. They were Marquis, Huron, Bishop, Bobs, Ruby and Prelude in the order of their yield per acre in a five-year average. Marquis yielded over 52 bushels per acre and Prelude, the lowest, over 34 bushels per acre. Yields on experimental plots are not much of a guide except as indicating possibilities. They are only occasionally duplicated in actual farm work as few practical farmers can afford to duplicate the conditions under which the former are made.

Marquis was also the slowest in maturity, requiring 132 days. Prelude was the fastest grower, requiring but 116 days. Indeed, the five-year average showed that the yield of the six varieties was directly proportionate to the time required for maturity, with the sole exception of Huron, which was second in yield and fourth in the number of days required for maturity.

Apparently, Marquis is the best of the six varieties for Alberta. Huron, the second best yielder, is low in milling and baking qualities. Bishop, the third yielder, is a white or amber-colored wheat and is not popular with millers. Bobs, the fourth yielder, is also a white wheat and is not uniform in type. Ruby possesses good milling and baking qualities. Prelude, which has the lowest yield and shortest period of maturity, has small, reddish grains and shatters easily.

ANTICIPATE HUGE GRAIN SHIPMENTS VIA PORT OF VANCOUVER THIS YEAR.

Calgary, Alta.—Local grain men estimate that the total bookings of wheat via Vancouver, this season will amount to approximately seven million bushels.

In the course of a recent interview with one of the representatives in Calgary of a Vancouver exporting house, "Canadian Milling & Grain Journal" was informed that the premium that was now being paid for wheat going via the coast as compared with Fort William represented an average of $100 a car. "There is every indication," he said, "that great as the increase has been this season in the Vancouver shipments, that this will be largely exceeded next season. For a considerable time there has been a regular procession of New York, Chicago, and Winnipeg grain agents at the coast looking carefully into the new route and they have apparently come to the decision that the new channel of shipment to the United Kingdom will become permanent."

WOULD AMEND CANADA GRAIN ACT.

Regina, Sask.—Should any portion of the Canada Grain Act, bearing on the licensing and regulation of grain commission houses be found ultra vires of the Federal Government, the Saskatchewan Assembly would undoubtedly fill in the gaps by passing such legislation as would enable the province to protect the farmers' interests, it was announced recently by Hon. Charles A. Dunning in the Saskatchewan Assembly.

Mr. Dunning's announcement came while the House was in Committee considering the amendments to the bill amending the Produce Commission Merchants Act, following a suggestion from Hon. J. A. Maharg, that the bill be broadened in scope to provide for provincial license and control of grain dealers, but this Mr. Dunning though was unnecessary at the present time.

SAVED 17,000,000 BUSHELS OF WHEAT.

Winnipeg.—Dealing with the report of an agricultural survey held last summer, Prof. T. J. Harrison, Manitoba Agricultural College, stated recently that seventeen million bushels of wheat were saved in 1921 by the poisoning of grasshoppers in the southwest section of Manitoba.

WANTED—Second-hand receiving separator. Capacity two to three hundred bushels per hour. Reply, The Petrolia Flour Mills, Petrolia, Ont.

THE WESTERN MARKETS

The following report furnished by Messrs. Baird and Botterell, 103 Grain Exchange, Winnipeg, shows daily highest price levels from January 27, 1922, to February 11, 1922, inclusive.

	Jan. 27	Jan. 28	Jan. 30	Jan. 31	Feb. 1	Feb. 2	Feb. 3	Feb. 4	Feb. 6	Feb. 7	Feb. 8	Feb. 9	Feb. 10	Feb. 11
May Wheat	1.16 1/8	1.16	1.16 7/8	1.16 3/4	1.16	1.18 5/8	1.20 3/4	1.19 1/2	1.22 7/8	1.25 1/4	1.25 5/8	1.27 1/4	1.27	1.28
July Wheat	1.10 5/8	1.12 3/8	1.13 5/8	1.13	1.12 1/8	1.14 3/4	1.16 1/4	1.15 1/8	1.18 5/8	1.21 1/4	1.22 3/8	1.24 1/4	1.23 3/4	1.24 3/8
May Flax	1.93	1.97	2.00	1.99 3/4	1.96 1/2	1.99 1/2	2.03 1/4	2.01 7/8	2.09 7/8	2.14	2.15	2.17	2.17 7/8	2.30
July Flax			2.02	2.01 7/8	2.01 1/2	2.01 7/8	2.02	2.01 3/8	2.03 1/8	2.03 1/8	2.03 1/2	2.17	2.18	2.30
May Rye	0.88 1/2	0.89 3/8	0.90 1/8	0.90 1/2	0.89 7/8	0.92 5/8	0.92 5/8	0.92 3/8	0.94 3/8	0.94 7/8	0.95	0.97 5/8	1.00 1/4	1.02 1/2
May Barley	0.59 1/8	0.60 3/8	0.60 1/8	0.59 3/4	0.58 7/8	0.59 7/8	0.59 3/4	0.60 7/8	0.61 1/2	0.61	0.61 5/8	0.62 7/8	0.62 5/8	0.63 1/8
May Oats	0.45 7/8	0.46 1/2	0.46 5/8	0.46 1/4	0.54 7/8	0.46 3/8	0.46 3/8	0.46	0.46 7/8	0.47 3/8	0.47 1/8	0.47 3/8	0.47 1/2	0.47 7/8
July Oats	0.45	0.46	0.46 1/8	0.45 5/8	0.45 1/8	0.45 5/8	0.45 1/2	0.45 3/8	0.46 1/2	0.47	0.46 3/4	0.46 7/8	0.47 1/8	0.47 1/4

Foreign Flour and Grain News

A growing tendency on the part of English importers to put in bids more in line with prevailing prices is having beneficial results for the export flour trade and it is hoped that with steadily improving exchange conditions this state of affairs will continue. Reports from the principal milling points of the country indicate that domestic business is strengthening and that immediate export prospects, while promising, are not what they would be if disabilities existing with regard to excessive freight rates were remedied.

The recent steady advance in the wheat market and which is reflected in a rise in the May option price from $1.08 on January 11, to $1.31⅞ on February 9, had not up to the time of going to press resulted in any increase in flour prices, but some advance is regarded as imminent.

Spring wheat first patents are quoted at $7.50, second patents at $7, and strong bakers at $6.80 per barrel in jute bags, ex-track, less the usual 10 cents per barrel discount for spot cash.

Winter wheat choice grades are being quoted at $6 to $6.25 per barrel, broken lots being quoted at $6.25 and $6.50 per barrel. First patents are steady at $7 to $7.25. The general tone of the winter wheat market is firm.

There has been a strong demand from foreign buyers for No. 1 northern of late and considerable business has been closed for February shipment. The steady rise in the market has stimulated sales generally and the upward movement shows signs of continuing. The demand for ocean grain room at New York is good, and slight increases in rates have been made effective at some ports.

RUSSIA.—The condition of the new winter seedings is about average, but the acreage is very short, and it is feared that Spring sowings will also be short unless many tractors can be obtained. Important purchases of maize and seed wheat have been effected in North America for Russian relief purposes. For the shipment of this grain, several American steamers have been chartered to Russian Black Sea ports at about 38c. per 100 lbs. basis.

ROUMANIA.—Sufficient snow and rain have fallen to enable wheat and other cereals to germinate under favorable conditions. The following official estimates of the acreage under winter crops this season, with comparisons for 1920-21, have been issued:—

	1921-22 Acres.	1920-21. Acres.
Wheat	2,827,000	5,904,000
Rye	404,000	655,000
Barley	185,000	160,000
Rapeseed	165,000	35,000

The large reduction in the acreage under wheat and rye is ascribed to the unfavorable climate conditions which prevailed during the sowing period.

AUSTRALIA.—Fine, seasonable weather is favoring the harvest, which is now in its final stages. An official forecast of the wheat outturn in South Australia gives 27,576,000 bushels, compared with 34,240,000 bushels last year.

SOUTH AUSTRALIA.—The official forecast of the wheat harvest of South Australia is 27,500,000 bushels. This is an average of 11.74 bushels per acre. For the ten-year period to the end of 1920 the average was 24,000,000 bushels.

INDIA.—Prospects for Wheat, Grain and Linseed in the Central Provinces are described as good. Crop prospects are also favorable in the Punjab and Bengal.

ARGENTINA.—Heavy rains have been experienced recently, which have been very beneficial for Maize and also for Wheat in the late southern districts. Fine weather is now required for conditioning Maize and Linseed. A report published in Washington estimates the total outturn of Wheat at 23,400,000 quarters, indicating an exportable surplus of 14,500,000 quarters.

GREAT BRITAIN.—A general improvement is reported in the demand for home milled flour, and values are steady. At Liverpool quotations are unchanged, but in London prices have been reduced 1/- (0.22) to 2/- (0.44) per sack, and now agree closely with Liverpool. Foreign flour is quiet, both on spot and for forward shipment, but quotations show but little change.

FRANCE.—Liberal falls of rain and snow have been experienced in all districts during the past week. Sowing is finished and fears as to a reduction in acreage are now no longer entertained. Growth is regular, and late sown seed is germinating under favorable conditions.

ITALY.—Reports on the progress of the winter crops are not altogether satisfactory. In the North there is a serious shortage of moisture, which is giving rise to much complaint, while in Apulia, one of the most important wheat growing districts of Italy, and also in Sicily, the crops have been damaged by excessive rains lately.

NORTH AFRICA.—Recent reports place the agricultural situation in a somewhat less favorable light. Heavy rainfalls have interfered with late sowing, and it is feared that in some districts the acreage under wheat and barley may not equal that of last year. A period of fine, dry weather would, it is stated, still save the situation, as the season is not yet too far advanced for sowing to be continued.

GERMANY. — Wintry weather prevailed throughout the country last week, and the fields have now a protective covering of snow.

JUGO-SLAVIA.—Some decrease in acreage is reported in Bacska and Banat districts, in consequence of the recent agricultural reforms. Last year's crop is now stated to be insufficient for home requirements.

AUSTRIA.—Very variable weather has recently been experienced, snowfalls alternating with rains. The fields are without snow cover, a fact which is causing no little anxiety to growers.

SWITZERLAND.—No further authorizations will be issued for the importation into Switzerland of bran and of flour for use as fodder made of cereals suitable for bread-making and of hard wheat. Import licenses already issued will, however, remain in force for the period fixed therein.

Grain Shipper's Protection Dependant on His Own Efforts

The different interests represented by the shipper, the carrier and the receiver of a carload of grain are centred around the question of determining, satisfactory to all concerned, the exact weight of the grain loaded into car.

The receiver is protected, usually, by weights, supervised at destination, by sworn weighmen. The carrier is protected by its claim agents which places the burden of proof upon the shipper and which gives to the carrier the privilege of showing where the shippers' weights, either because of the principle of the scales or because of his system of weighing may have been in error.

The shipper is not protected except the protection that his own weighing scales and his system of weighing together, with his own care gives him.

These conditions are a serious menace to the shipper unless he is as careful and accurate in weighing the grain that he sells as he is when he buys it from growers, and as careful in making his cars grain tight as he naturally would be in making his elevator grain tight.

Grain Dealers Operations.

Grain dealers handle grain on a small margin. They must be able to load out and collect for all the grain they buy, naturally shrinkage excepted, or they face a loss. Of course, a man's ability to "buy right" and to "sell right" counts for a great deal, as does also his ability to improve the grade of his product before selling. The foundation of his business, however, the only thing that sets a grain dealer right for a sure profit, is that his weights hold out. The juggling with prices and grades may miss fire occasionally.

What precaution does the average grain dealer take to protect his weights and to make them hold out? He spends all day, if necessary, at his wagon scale, supervising the weighing of grain when he buys, but when he ships he is content to have a scale weighing usually from three to six hundred bushels at a draft, stand unsupervised in a dusty and dirty cupola to do the work for him. He even demands to be free of the supervision of the weighing out, satisfied it is not necessary and thinking that it is a waste of time and effort. The natural inference, that anyone interested would make, is obvious.

Must be a Psychologist.

A successful business man, be he in the grain business or in any other line, is a keen psychologist. He conducts his business so that the people he deals with, both buying and selling, get confidence in his methods. A banker will extend credit as much upon past experience as upon financial worth. A railroad will determine the value of a grain shipper's claim for shortage as much upon the system and method of his weighing as upon the accuracy of his scales.

If it be known that railroad and weighing authorities generally object to certain weighing methods extensively used by country grain shippers, is it good business to persist in determining shipping weights in this disapproved manner? No matter what one's personal opinion and inclinations may be, is it not good business to follow the lines of least resistance in such an important part of one's business as determining the weight of one's scales?

The scale may weigh correctly. If the system of weighing used gives an interested party a chance to puncture holes in proof of weight one might as well have had no scales, so far as the merits of one's claims are concerned.

The triangle of the shipper, the carrier and the receiver represents all different interests that is bound to be asserted in case of losses in transit or serious discrepancies in weights at destination. Who will prevail?

To begin with, the burden of proof is on the shipper. If the carrier or the receiver can show by precedence and record that the shipper's weighing system is not reliable the shipper is at once facing a compromise or else a lawsuit. In either case it means a loss to the shipper.

Claims Agents Are But Human.

The grain shippers may think what they will about the fairness or unfairness of the carrier, in matters pertaining to claims for losses in transit, a claims agent is human and undoubtedly can show that shippers too, have tried to slip something over, consequently he will protect his company's interests with the means he has at hand and if the shipper gives him any loopholes through which he can contest his weights he will do so. On the other hand if the grain shipper adopts a weighing system that in the first place eliminates the known objects of the carrier he automatically places the burden of proof upon the carrier, making it necessary for him to prove the shippers' weights wrong.

A scale and a weighing system that cuts out the many small drafts, that is independent of conditions in the elevator and the grain, that is independent of the operator's mistakes, of his ability and of his judgment a scale and system that leaves nothing to chance, that a man knows is right at every draft would seem to be the logical weighing equipment for country elevators to use.

If any shipper of grain, therefore, has trouble with his weights he should investigate carefully before equipping his elevator with a shipping scale and be sure that he equips himself so that he can eliminate the known objections of the carrier to taking the shippers' weights as determined by the type of scales now in use.

IMPORTANT ELEVATOR "DON'TS"

Don't forget to keep elevator and premises as clean as possible.

Don't forget to see that all bearings are kept well oiled.

Don't forget to have electric wiring and motors properly installed.

Don't forget to keep stove pipes and chimneys in good condition.

Don't forget to repair leaky gasoline pipes without delay.

Don't forget to give the plant the "once over" before the plant is closed for the night.

Don't overlook having a non-freezing fire extinguisher always on hand.

The Elevator Operator

ENGLISH FIRMS GET BIG CONTRACTS FOR SOUTH AFRICAN ELEVATOR MACHINERY.

London.—Contracts for the machinery for the thirty-six new grain elevators for the South African Government have just been placed with British firms.

Messrs. Spencer and Co., Ltd., the Melksham engineers, have received the order for the whole of the plant for the terminal elevator at Durban, which will have a capacity of 42,000 tons, and will load ships at the rate of 1,000 tons an hour, and also for the smaller collecting elevators which will feed the two terminals at Durban and Cape Town.

The big elevator at the latter port will be equipped with machinery by Messrs. Henry Simon, Limited, of Manchester. The whole of the constructional steel-work for the elevators will be supplied by the Furness Shipbuilding Company, of Middlesborough.

The construction of this series of elevators, which will revolutionize the handling of South African grain, is about to be commenced by the Canadian firm of Messrs. A. W. Menkins. The greater part of the $22,000,000 raised by the Union Government in England will, it is understood, be expended on the scheme.

ENLARGEMENT OF G. T. ELEVATOR IS DEFINITELY DECIDED UPON

Montreal.—The Grand Trunk Railway Company is to increase its elevator capacity in the Port of Montreal by building an addition to the Windmill Point elevator capable of accommodating an additional million bushels of grain, and to instal a car dumping machine and a second carrier for delivering grain to ocean vessels. Mr. C. J. Smith, manager and secretary of the Montreal Warehousing Company, a subsidiary of the Grand Trunk, has authorized the following statement:

Statement of Company.

The Montreal Warehousing Company are calling for tenders to increase the capacity of their Grand Trunk elevator "B" at Windmill Point. The proposed additions, alterations and improvements will consist of an additional storage annex of 1,000,000 bushels, which will bring the storage capacity of the elevator up to 3,000,000 bushels.

It is also their intention to instal a car dumping machine for unloading cars as against the present method of unloading by air shovels. A second carrier is also to be built for delivering grain to ocean vessels. It is expected that the car dumping plant and additional loading facilities will be in operation for the opening of navigation and that their installation will materially increase the unloading of cars and delivery of grain to ocean steamers.

The additional storage should be ready for grain a month or two after the opening and in plenty of time for next season's northwest crop.

WELL-KNOWN ELEVATOR MEN

J. C. GAGE

President, International Elevator Co., Ltd., president and general manager, Consolidated Elevator Co., Ltd., executive member and acting chairman of the Board of Grain Supervisors for Canada, ex-president of the Winnipeg Grain Exchange, and vice-president of the Grain Products Co., Ltd. Born Minneapolis, February 25, 1876.

NEW ELEVATOR FOR VANCOUVER

Vancouver, B.C.—It is reported that a large grain elevator, with an initial capacity of 150,000 bushels, which can be increased to 1,000,000, will be erected in Vancouver by a party of local capitalists. The building will be completed in about six months time. The elevator will include a sacking and drying plant and will be erected on Burrard Inlet. The Government elevator here has been very busy this winter, over 110,000 tons of wheat being booked out of the port. There is also a large flour movement this year.

Recent events in the United States have demonstrated that a tariff on wheat and its products is remarkably ineffective, either for good or ill; the worst harm it can do is in making people hope for benefits which it can by no possibility bring about.

Elevator, Mill & Personal Notes

Saskatoon, Sask. — The Anglo-Canadian Grain Co., Ltd., capitalized at $250,000, and which has been financed entirely by British capital, has taken over the Saskatoon Grain Company. The new company is operated under a Dominion charter with head office in Winnipeg, and branches at Saskatoon, Regina, Edmonton and Biggar. Mr. W. Sidney Ronald, chartered accountant of Winnipeg, is chairman of the board of directors.

Medicine Hat, Alta.—Large export orders are being received by Medicine Hat flour mills and up to the present time they have shipped 1,760 tons of flour to Europe, which is moving via Vancouver and the Panama Canal, and have yet to ship by that route 2,498 tons. They have also shipped eighty tons of flour to China and have about three hundred tons in sight for that destination.

Oswego, N. Y. — The north-western elevator, owned by Messrs. Robert Doherty & Company, and well-known to Canadian grain handlers, was destroyed by fire recently with a loss of $150,000. The elevator was said to be the largest on Lake Ontario.

Chatham, Ont.—Complete repairs have been effected to the plant of the T. H. Taylor Milling Co., Ltd., which suffered slightly from an outbreak of fire some time ago.

Orangeville, Ont.—Mr. A. E. Hanley has opened a new chopping plant here.

Toronto, Ont.—The Crystalline Milling Co., Ltd., has been incorporated with capital stock of $500,000.

Hanna, Alta.—The Hanna Milling Co., Ltd., is installing a 50-Barrel Midget Marvel Mill, purchased from the Pollard Manufacturing Company, Ltd., Niagara Falls, Ont.

Thorndale, Ont. — The 75-barrel mill of the Thorndale Milling Co., Ltd., has been sold to Mr. C. E. Nourse, a Toronto grain and feed merchant.

Rouleau, Sask.—The Malden Elevator Co., Ltd., has been incorporated with capital stock of $250,000.

Vancouver, B.C.—Slight damage was done to the plant of the Victory Flour Mills Co., Ltd., here, by a fire of recent origin. Defective electrical wiring is believed to have been the cause.

Kindersley, Sask.—Mr. J. E. Hurl is installing a 50-barrel Midget Marvel Mill, supplied by the Pollard Manufacturing Co., Ltd., Niagara Falls, Ont.

New Hamburg, Ont.—The 100-barrel mill operated by Messrs. Stuart Bros., was sold recently to the Wolverton Milling Co., Ltd., of Wolverton, Ont. The plant will be run as a New Hamburg branch of the Wolverton concern.

Toronto, Ont.—The Western Canada Flour Mills Co., Ltd., has been incorporated under the Ontario Companies' Act.

Toronto, Ont.—The late Mr. John Grant, head miller of the Crown Milling Company at Portland, Oregon, who was struck by a freight train recently and instantly killed, was a brother of Dr. A. S. Grant, president of the Ontario Referendum Committee. The late Mr. Grant was born at Huntingdon, P.Q., sixty-five years ago. Two sisters reside in Montreal.

Mr. J. S. Barker, who was elected vice-president of the Maple Leaf Milling Co., Ltd., in succession to the late Mr. Hedley Shaw, has been a director of the Maple Leaf Company for some time. Mr. Barker entered the milling business as an apprentice at the age of 16 and at 19 was in charge of a mill near Port Hope, Ont. Later he managed mills at Alvinston, Pickering, St. Catharines, and Thorold. In 1907 he installed the system in the Maple Leaf Company's big mill at Kenora. In 1910 he designed and developed the Maple Leaf's mill at Port Colborne. A mill at Medicine Hat was also designed and built by Mr. Barker in 1914.

Mr. J. A. Speers, of Fort William, Ont., has been appointed general manager of the Lake Shippers' Clearance Association succeeding the late Mr. Fred Young. Mr. Speers was before his promotion Fort William manager of the Association.

Mr. J. H. Mahl, assistant to the president of the United States Grain Growers, Inc., was in Winnipeg recently on his way home to Chicago after having addressed the convention of the United Farmers of Alberta, at Calgary.

Mr. Lorne Cameron, of Vancouver, B.C., has been elected to the directorate of the Maple Leaf Milling Co., Ltd.

Mr. G. Arthur Burgess, the well-known miller of Carleton Place, Ont., was a caller at the offices of "Canadian Milling & Grain Journal," while on a visit to Montreal recently.

Mr. Andrew Taylor, of Messrs. D. T. Russell & Baird, flour importers, Glasgow, was in Toronto recently on his way home after having spent some time in California. Mr. Taylor handles the Maple Leaf Company's business in Scotland and Ireland.

Mr. R. A. Thompson, of Lynden, Ont., president of the Dominion Millers' Association, was in Toronto recently on business.

Mr. A. C. McLeod, manager of the Canadian Cereal Company, Stratford, Ont., was a recent visitor in Toronto.

Md. Edward Pfeffer, of the Pfeffer Milling Co., Ltd., Milverton, Ont., which recently installed considerable new equipment, was a caller on the Toronto milling trade lately.

Mr. Thos. Williamson, president of the St. Lawrence Flour Mills Co., Ltd., is spending a short holiday in the South.

Mr. W. H. McCarthy, of the Maple Leaf Company, Toronto, spent some days in Montreal on business recently.

Mr. H. A. Hewitt, manager of the mill feed department of the Maple Leaf Milling Co., Ltd., has returned to Toronto after a few days spent in Buffalo, where he has been calling on his firm's mill feed connections.

Mr. J. Strachan, representing the Carpenter Grain Company, Battle Creek, Mich., was a recent caller at the office of Mr. C. R. Vannatter & Co., Limited, Dominion Bank Building, Toronto.

Some Useful Hints on Electrical Equipment for Practical Millers

The winding of continuous current generators is a task that must frequently be done round the mill, and a general knowledge of how this kind of work should be done will mean a saving of much time and trouble. Continuous current generators should be wound according to the shunt method of winding as in Fig. 1, the series method as shown in Fig. 2 or the compound method as in Fig. 3. The diagrams show the system of wire connections between the field and the armature.

In the shunt system of winding very fine wire is employed on the field magnets. The connection with the external circuit is made in parallel instead of in series as in the series wound method. In this system of winding, the electrical current passes through the magnetic coils independent of the strength of the current in the main circuit.

The pressure of the brushes under varying loads is maintained in a constant condition by an adjustment of the current passing through the field magnets. This is accomplished by connecting in a resistance coil or a form of rheostat in the field magnet circuit.

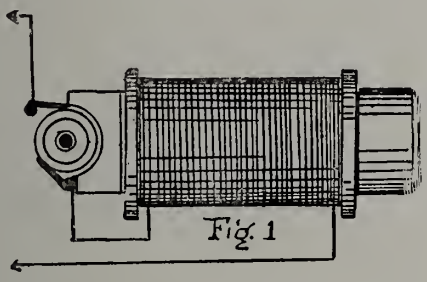


Fig. 1

The shunt wound generator is useful in flour mills as in other plants in connection with supplying incandescent lighting from a central point in the place. The pressure is readily controlled by simple hand regulation which makes it convenient for a mill service. The resistance is divided into a number of separate coils and the terminals of these coils are joined to brass or other metal plates adjusted in circular form on the surface of some non-conducting substance like slate. By employing a circular form, it is possible to have a contact adjustment to be operated by hand, so that the contact can be made at any point in the circle to regulate the resistance.

In Fig. 2 is shown the arrangement of wires and connections of the series wound self-exciting continuous-current generator. In this system of winding the current in the main circuit passes through the field magnet windings. This form of generator is commonly used for series-arc lighting in flour mills. These types of generators are often used for two hundred or more lights, equal to over ten thousand volts at the generator terminals. Shunt winding for a pressure of this magnitude would hardly be practicable owing to the cost.

There are two methods employed for regulating the strength of the current and holding it constant with the varying requirements of the service. The best method is to shift the position of the collecting brushes on the commutator according to the increase or the decrease of the load in the external circuit. The armatures of series wound arc-light generators are of two kinds, known as the closed-coil and open-coil armatures. The difference is that in the former all of the armature coils are constantly in the circuit while in the latter a certain number of the coils are cut out of the circuit by the commutator in each revolution.

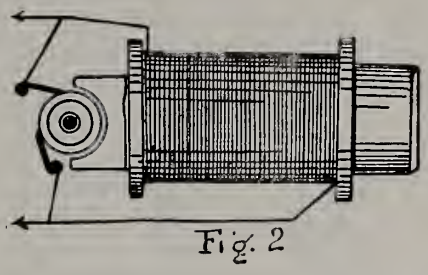


Fig. 2

Fig. 3 shows the compound system of winding a generator, and Fig. 4 is a diagram of the automatic regulator connections sometimes employed. In the latter diagram there is an electromagnet in the main circuit as shown. The disc pile presents a certain resistance as the pressure on it increases.

In practically all commercial circuits, the electro-receptive apparatus must be operated at the constant pressure or the constant current. The constant pressure apparatus is more numerous in employment in flour mills. These are seen in the types of parallel or multiple connected motors for lighting or for power for electrically operated machines. Some of the apparatus has to be operated by a constant current, as is known; such, for example, as the arc lamp. Also in the same class is found a number of forms of motors for general power purposes.

Brush tension is a matter of importance in all forms of motors. Each carbon brush should be examined carefully to make sure that it is properly clamped by the casting of the holder. Often bad

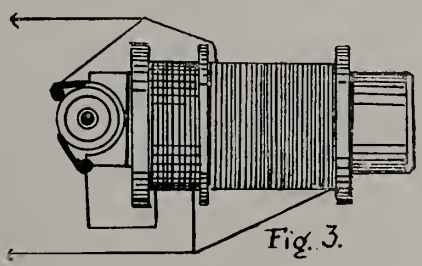


Fig. 3.

results follow the loosening of the set-screws and sometimes accidents are caused. When the brushes are in proper order and move freely in adjustment, the spring tension should be looked after. Just enough tension is required to press the brush evenly and firmly against the commutator.

The brush will wear away in time and then a new setting will be required as it will be shorter. In order to get sparkless operation the brush should be run with the least possible tension.

(Concluded on page 28.)

THE PRACTICAL MILLER

(Concluded from page 27.)

The oil chambers of the machine should receive attention. Regular dynamo oil should be used. Heavy grease that will do for certain slow revolving bearings in a flour mill will not answer in the speedy mechanism of a motor.

Light machinery oil can be used with fair results, but it is advisable to employ only the standard dynamo oil. In a certain flour mill the right grade of lubricant was used, but the person in charge was accustomed to allow the old oil to remain in the oil holes of the machine. The oil which had been in

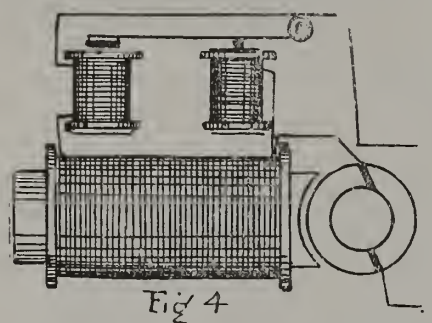


Fig 4

use had served its purpose and had also accumulated dust and other foreign substance and should have been washed out at intervals by unscrewing the drainage plug which is usually at the bottom of all bearings of high speeded electrical devices. Then when the parts are drained and cleaned with gasoline or lye water, the new oil can be put in without liability of its being contaminated and spoiled by the thickened and exhausted old lubricant.

MILL LABORATORY RESEARCH WORK

While much has been accomplished by flour mill laboratories towards determining the composition of the various chemical elements entering into a grain of wheat, laboratory research work as affecting the manufacture of bread out of wheat presents as yet practically an untouched field. When what has to be learned and put to practical use is considered the chemical aspect of flour milling is virtually in its infancy, though enormous strides have been made towards the development of flour mill chemistry during the past ten or fifteen years.

The average laboratory report shows the following: ash, moisture, protein and the absorption of the flour. This is supplemented by the report of a test baking: The percentage of ash is an indication as to the purity of flour and reveals whether or not the flour is free from impurities. The percentage of protein merely gives the amount of this particular substance in the flour. The same can be said of the percentage of moisture. It merely gives the amount of water contained in the flour. The absorption indicates the amount of water to be added to the flour to make a dough of the proper consistency.

The baking test shows the relative baking value of a flour. To be of value it should always be made in comparison with a flour of known baking value. To be of value to the baker the report should state in detail the formula used, the time of fermentation, the temperature during fermentation period, the number of punches and the time between each, the time of proof, weight of dough scaled for a loaf, as well as the volume and general appearance of the finished loaf. These simple determinations are of great value to flour users; if the ash, moisture, protein and absorption are satisfactory and the baking shows to good advantage, it pretty well proves the flour. The analysis should precede the baking as the absorption and protein will give an indication as to the manner of fermentation and the formula to be used. A flour with a large percentage of protein and a high absorption requires a longer period of fermentation or may be worked to better advantage with yeast foods, sugars and malts than a weaker flour. However, there often occurs the case wherein the ash, protein, moisture and absorption is right and the baking in the laboratory and everywhere else is wrong. A great many times this is all explained by saying "quality of gluten" and there the matter is allowed to rest. No need for anything further, the case is all settled, the chemist has spoken and may now go home with an easy conscience, but it does not make the flour any better.

Sometimes this condition is brought about by a poor quality of gluten but if such is the case, the chemist with his work in wheat selection and wheat conditioning is at fault and no one else. Many times it is not the fault of the gluten at all but the absence of some substance which will react on the gluten during fermentation to give it that elasticity needed to retain the gas generated during fermentation. Again, it may be the presence of a substance which retards this same gas generation, or again it may be the presence of substances which generate so much gas that it quickly wears out even a good quality of gluten. If one knows what is causing the trouble it is possible to take steps to avoid it.

Here is where research work is needed. For after all what is known concerning the acidity of flour, its hydrogenion concentration, its decomposition products, such as soluble protein and reducing sugars? How much is known concerning the absorptive powers of the glutens with acids and gases and waters of various mineral contents? How much is known concerning the mineral constituents of ash which will act on gluten during fermentation? What is known to-day of the enzymes present which will act during fermentation on both the starch and the gluten? All of these things and many more besides must be known and thoroughly understood before one can truly say that he understands what flour is. Furthermore, these things should properly be known as the wheat is being blended and changes if any noted during the tempering process. In fact, the analysis of the dry wheat blend should govern tempering the same as the analysis of flour should govern its treatment during fermentation.

In conclusion it might be remarked that there is great need of the introduction into flour mill labora-

THE PRACTICAL MILLER

tories of more refined methods of analysis as some of the constituents mentioned are present in very small quantities, and very small quantities, it must be remembered often have a very great effect.

It is evident that work in great quantities lies ahead of the laboratory. Much of it may not help the operative miller in his actual work of milling but it will help to produce a better and more uniform flour, aiding in which is the mission of the mill laboratory and its chemist.

SMOOTH ROLLS AND PURIFICATION.

It should always be borne in mind that the greatest part of the purification of stocks in a flour mill is performed by the smooth rolls flattening the branny particles and at the same time breaking down the endosperm.

This stock then passes from the roll to the sifter section and there the scalp cloths separate the large flattened branny particles from the smaller endosperm so it depends upon how well the roll has performed its work and how well the scalp cloths have performed their work as to purification upon each stock.

INCREASING THE STRENGTH OF FLOUR.

At a recent convention of the Master Bakers of Australia, T. J. Kelly, of Sydney, read a paper on "Baking Trade Evolution" that contained many interesting points. Speaking of the mystery of strength in flour, he said that a flour may be rich in gluten but not strong from the baker's standpoint. Then he told how chemists have found that, by the use of 2 ounces of persulphate of potash per ton of flour, an ordinarily weak flour becomes a strong flour. Just in what manner the change is effected is not clear, but the fact remains. The persulphate is a new drug, produced by forcing a current of electricity through a dense solution of acid potassium sulphate. It has been used to strengthen weak English wheat. A Hull corporation sued one firm which followed this practice, for selling an adulterated flour. Professor Jago, the well-known authority on bread, was called to give evidence for the defense, and proved that nothing of a harmful nature was left in the flour. The decision was given against the corporation. As a matter of fact, the substance added is present in all flour naturally. The acidity of weak flour is increased by the addition of the potassium persulphate.

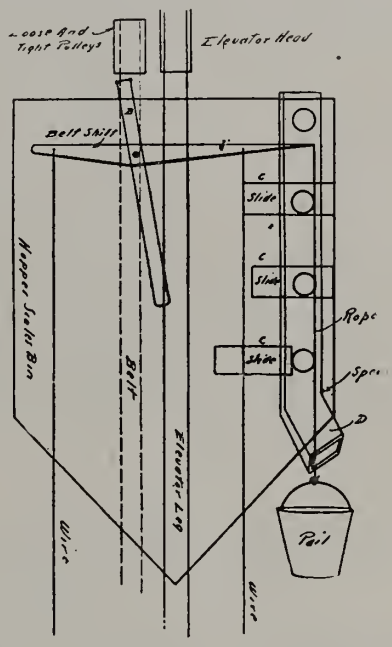
CORRECTING SOFT STOCK CHOKES.

Soft stock from bran and shorts dusters is usually so soft that it is continually choking and stopping the machines. This can be easily remedied by cutting a small door in lower part of the larger door, then when spouts choke the carriers on the case inside will force the small door open and push the stock out on floor.

REGULATING HOPPER SCALE FLOW

Here is a sketch of a device which has been found of practical use in preventing the overflowing of hopper scales. In the instance where the accompanying idea was put into effect the hopper scale was in the extreme top of the mill. Into it all grain was delivered by the elevator. The elevator shaft was equipped with loose and tight pulleys so that when it was desired to stop the operation of the elevator all that had to be done was to pull a wire attached to each end of lever A, which is part of the belt shifter apparatus B.

In order to save a trip to the top of the mill when the hopper was full, the originator of the idea illustrated attached to the end of lever A a rope at the end of which was attached a small water bucket.



This bucket was made to hang directly under the end of a small spout running from the top to the bottom of the hopper, but under this spout was cut four holes through the side of the bin.

When it was desired to put about 12 bushels of wheat into the hopper the lower slide C is opened, then when the hopper becomes filled to that point the grain flows out of the hole through the spout D into the bucket which, when it gets about half full is heavy enough to pull down the lever and thus shift the belt from the tight to the loose pulley and thereby stop the elevator.

By this method a miller can set his scales to hold practically any amount with a safety hole at the top without any slide that will fill the pail before the hopper is full and before the bin runs over. The apparatus can be arranged at trifling cost and saves many wearisome climbs to the top of the mill.

One of the "wurst" we have heard for some time is the answer given by the facetious orderly officer who, to the soldier who complained that one end of his breakfast sausage was filled with sawdust, said that possibly owing to hard times the manufacturers were unable to make both ends meat.

THE PRACTICAL MILLER

CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

FLOUR SALESMEN—A large milling concern requires the services of experienced flour salesmen. Applicants must state experience and give credentials. Reply Box F 20, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED.—Grain Scourer, capacity two to four hundred bushels per hour. State H.P. required to operate. Machine must be in good working order. Reply Box 105, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED — By Head Miller, with 20 years practical experience in modern Canadian mills up to 4,000 barrels capacity. Can guarantee best results as to quality and yield on both hard and soft wheat, and maintain mill at highest point of efficiency. At present in charge of a 1,000 barrel plant. Reply Box 85, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

PRACTICAL MILLER with 23 years experience seeks position with plant having daily capacity of 250 barrels or upwards. Can furnish excellent references. Reply Box 82, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—A 50-barrel Midget Marvel Mill, also complete installation of a flour milling plant. In use about three months. Machinery must be moved from actual premises. Good price for cash. Reply Box 103, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Head miller, with twenty years experience in 150 and 275 barrel mills, and still employed, is desirious of making a change. Applicant is 36 years of age, married, and can furnish excellent references. Reply Box 84, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

SALESMAN WANTED for the Province of Quebec. State requirements, experience and salary wanted. Reply Box 102, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

WHEAT TESTER WANTED.—Must be in first class condition, and reasonable in price. Reply Mr. Charles Wyild, Ripley, Ont.

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THE PRACTICAL MILLER

WANTED.—Position as loading foreman by young man, twenty-eight years of age. Has had a number of years of general milling experience in mills of various capacities. Keenly interested in milling work and prepared to give best service. Reply Box 63, "Canadian Milling & Grain Journal," Dubrule Building, Montreal.

FLOUR SALESMAN wanted, to represent Ontario flour mill in Montreal. Must have experience and be able to furnish best of references and a bond. Must speak both languages. Reply, giving full particulars, Box F25, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FLOUR SALESMAN seeks position. Has splendid connection in Montreal and Quebec. Speaks French and English fluently. Prefers mill handling Manitoba wheat. Knows business thoroughly. Good credit man. Reply Box 90, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—Flour milling property in first class condition. Modern equipment. Good reasons for wishing to sell. Reply Box 83, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

FOR SALE.—New 50-Barrel Midget Flour Mill. Will sell cheap. Address Box F. 70, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

MANAGER WANTED—Modern flour mill in Ontario requires the services of a first class manager. Close knowledge of flour market a prime essential. One with record as a business getter will receive preferred consideration. State age and salary expected. Reply Box 87, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

STENOGRAPHER—A large flour milling company requires the services of an experienced stenographer, one with previous experience in the trade preferred. Reply Box F 21, "Canadian Milling & Grain Journal", Dubrule Building, Montreal, P.Q.

FLOUR SALESMAN open for immediate engagement in the Maritime Provinces. Experienced. Reply Box 104, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED—Best price on second-hand Midget Marvel Mill, also, terms, if any. Reply Box 93, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—First class mill, 130 to 140 barrel capacity. Good water power, equipped with modern machinery and doing a big local and shipping trade which goes with the business. Attractive terms will be given. Reply Box 94, Canadian Milling & Grain Journal, Dubrule Building, Montreal, P.Q.

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HYDROCYANIC ACID GAS FUMIGATION

Up to the time of the discovery of the heat method, hydrocyanic acid gas fumigation was considered the most effective means for the control of mill insects. Experiments now go to show, however, that while some mill insects succumb very readily to the hydrocyanic acid gas, others, including some of the most serious ones, do not yield readily to this treatment. If a mill is infested with Mediterranean flour moth, hydrocyanic acid gas is a very effective treatment. All stages of this insect, including the eggs, if not covered with more than one inch of flour, succumb to the gas. On the other hand, if the mill is infested with the several species of flour beetles and of grain beetles, and with the cadelle, the gas treatment is of little value. In no case where it is possible to use the heat method is the use of the hydrocyanic acid gas treatment recommended, but since it is effective for Mediterranean flour-moth infestation, and since there are flour mills where it may be impossible or impracticable to use the heat method, the hydrocyanic acid gas treatment is then recommended as the best method.

Apparatus Necessary.

There are necessary for this treatment the sodium cyanide, sulphuric acid (best commercial grade, with specific gravity of not less than 1.83), water, stone jars (four-gallon size), paper sacks (common manila, size No. 8 and 10 as may be obtained from the grocer)) and vessels for measuring and carrying of the acid and water (one-gallon or two-gallon graniteware cups or pitchers are most convenient; tin vessels must not be used).

Formula for the production of the gas sodium cyanide, by weight, 3 pounds, avoirdupois; sulphuric acid, by measure, 4½ pints water, by measure, 9 pints.

Inside measurement of the length, width and height should be carefully taken to determine accurately the number of cubic feet in each story to be treated, no allowance being made for empty bins or machinery. If the building is well constructed and reasonably tight, the following standard may be followed for mill fumigation: In the basement use one pound of sodium cyanide to every 1,000 cubic feet; on the first floor one pound to every 1,200 cubic feet of space; on the second floor one pound to every 1,300 cubic feet; on the third floor one pound to every 1,500 cubic feet; on the fourth and fifth floors one pound to every 1,600 cubic feet. In case the floors cannot be handled separately, the amount should be increased on the lower floors, and lessened on the upper floors, for the gas is light and rises.

Preparing for Fumigation.

Before stopping the mill, close the feed and let the mill run empty. Go over the spouts, the elevator legs, etc., with a spout maul to jar the flour or meal loose so that it will run out. Open the hand holes, slide doors, etc., in the spouts, the elevator legs, the bolters, the purifiers, the rolls, the dust collectors and the conveyors.

All accumulations of flour or meal should be brushed out or removed from the elevator boots, the conveyors and other places in the machinery where flour has lodged. The entire plant should be cleaned as thoroughly as possible and this material removed and disposed of in such a manner as not to be brought back into the mill.

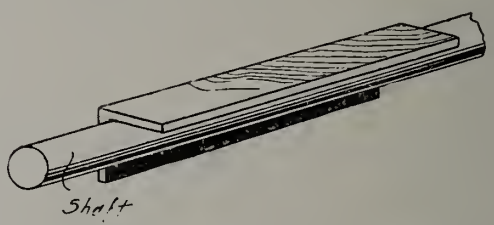
The building must be as nearly air-tight as possible. Windows may be wedged tight. If they are loose, either paper should be pasted over the cracks, or cotton batting should be inserted in the openings with a case knife. Cracked panes should either be replaced or pasted over with paper. Each floor should be made entirely separate from other floors. All belt holes should be stuffed with sacks, and all elevator shafts should be closed. All stairways should be closed, or covered by trap doors.

To provide for ventilation after the fumigation, arrange two opposite windows on each floor so that they may be opened by means of a stout cord or rope from the outside.

Place danger signs of fumigation on all sides of the mill, and have a watchman guard the mill during fumigation.

MARKING SHAFT FOR KEY SEAT

Here is an idea to use in marking the lines on a shaft for a key seat. Take a piece of half-inch wood two inches wide, and make an accurate angle, as



shown in the sketch. Place it over the shaft and draw or scratch a line along straight edge on the shaft then measure over the width desired for key seat and scratch the second line.

FLOUR GRADES AND BAKING VOLUME.

While patent flour with an average percentage of gluten, small ash content, say 0.43, and small fiber, will make the whitest and largest loaf of bread it will not make the most bread. Real patent with the average amount of gluten and small percentage of ash will absorb less moisture and more of it will bake out than with a 95 per cent straight or even a high clear. Either of the latter will contain more gluten and more ash than patent, and will absorb more water. Clear flour usually has an excess of gluten. Straights and good clears will turn out more bread than patents; and, where quantity is a desideratum, and a grade or two of whiteness and lightness do not count, will give satisfaction.

Men are born with two eyes but with one tongue, in order that they should see twice as much as they speak.

THE PRACTICAL MILLER

The Question Box

With a view to making this department one of real service, "Canadian Milling & Grain Journal" cordially invites its readers to send in their problems to The Question Box. There are but very few millers or elevator operators who do not have worries in the proper conduct of their plants. It may be due to lack of experience or inability to trace cause and effect. The logical and sensible thing to do is to ask someone who may possibly know. Often he is not at hand. and still oftener the perplexed miller or elevator operator does not want to show his lack of knowledge. Under these circumstances he can address his inquiry to the craft through this journal. His name will not be divulged if he wishes to remain incognito. Someone is sure to reply who has had similar problems to meet or similar questions to ask. We guarantee to devote all the space necessary to the asking and answering of questions, so do not be backward in sending them in.

THE EDITOR.

QUESTION.—Which is the best way to grind to produce the least ash in the flour? Ever since this ash business has come up nearly every buyer wants to know what percentage of ash our flour contains. I believe this would be a good matter to take up with the milling fraternity and have them express opinions regarding it. It is one of the biggest problems that the miller has had put up to him in a good many years and one that we must devote a lot of time and thought to.—C. L. T.

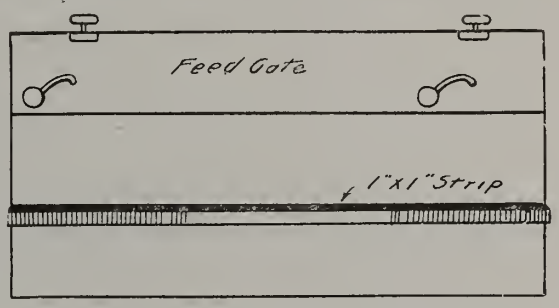
ANSWER.—The production of a flour with a minimum ash content, from a given wheat, depends not only on the grinding, but on the cleaning of the wheat, the tempering, the breaking, scalping, grading and bolting. A flour freest from bran-particles can be produced from a clean, well-tempered wheat by breaking for the largest amount of large middlings (not chunks) and the smallest quantity of fine middlings and flour. The manner in which the product of the break-rolls is treated on the sieves that make the necessary separations has a very important bearing on the condition of the resultant middlings and flour—even on the amount of flour made. A scalping wire and a bolting silk is regarded as something flat, but, compared to the size of the particles that pass over them, they are anything but that. The mesh of wire is made by weaving the crossing wires over and under each other. The depth of the depressions caused by these ridges of wire is something like one-half the breadth of the middling that will pass through the mesh. The friction caused by gyrating such a sieve under the stock is comparatively very great. If the wheat were a foot across, and the coarse middlings two or three inches the depth of these holes would be nearly an inch and a half. Such a sieve would swing about twenty feet, and the cutting action of these 1½-inch wires on delicate middlings can be imagined.

While this is not roll action, it should be considered in connection with breaking. If a good break chop is subjected to too much agitation on the scalping medium a great deal of damage may be done there.

If large, clean, well-dusted middlings are once produced they can be made into flour of minimum ash content only by sizing and purifying, re-sizing and re-purifying; the object of each reducing operation being the production of as little flour and as many smaller middlings as possible. Not until the middlings are small enough to pass through an 8XX cloth should an effort be made to actually produce flour. If these small middlings have been produced by light pressure and gentle action their ash content will be very low; and consequently, a low-ash flour can be made from them very easily.—M. E. C.

IMPROVING OLD SHAKE FEEDERS

Sometimes the miller has to contend with an old shake feeder that will only deliver the stock to the rolls in irregular quantities—a highly unsatisfactory performance. If he will screw a strip of wood, 1 x 1



inch, across the apron of the feeder, as shown in the drawing, the stock will be retarded, spreading and falling over the strip and reaching the rolls in an even sheet.

MILLERS AND "STABILIZED PRICES."

The miller buys grain and sells its product continuously. None has a greater interest in a "stabilized market" than he and none would like to see it free from wild fluctuations more than the miller, for it would remove from his manufacturing and commercial operations the disquieting element of speculation. Even if he can protect himself by "hedging," an uncertain and fluctuating wheat market has a mischievous effect on the miller's business. The last crop year may be cited: Fluctuations in wheat kept the flour market in a state of hesitation all through the year. Nobody profited from that.

Indeed, the miller is the last person to object to the ideal of the farmers of stabilized prices for wheat. The fact that such a condition is desirable does not mean that it is attainable. The grain growers' common idea that you have only to stop speculation and control wheat marketing by a central agency in order to reach stabilized prices, is not convincing.

DRILLING HOLES IN CASTINGS.

Did you ever try to drill a hole in a casting that was bumpy or oblong? If you did you probably found it pretty hard on your religion. Here, however, is a way to do it easily. Take a hardwood plug the size of the hole, send it home, trim it off even with the iron and then center your drill, you can drill the hole out without any trouble.

THE PRACTICAL MILLER

TENSILE STRENGTH OF USED BELTING REDUCED BUT LITTLE BY RENOVATION.

One might think that renovated belting would be greatly inferior in tensile strength to new belting, but such is not the case. The difference in tensile strength between the new and old belting is not more than 10% in favor of the new belting, and because there is such a great margin of safety in new belting, the tensile strength of the renovated belting comes well within the limits of engineering practice. There is little difference in the stretch of the renovated belting also, indicating "life" in the finished product.

Renovated belting goes back to the belt user in rolls of 300 ft. as a rule, and in standard widths. Of course the belt user who has sent in scraps of 12, 16 and 24 in. belting, for instance, does not get back belting of those widths. What he will get back, probably, is belting of 10, 14 and 22 in., the reason being that ragged and worn edges are always trimmed in the manufacturing process. Most of the belting sent in for renovation will amply stand such a trim as it has probably been in high-speed service on small pulleys and already repaired before.

The process of renovation is distinct from repair, as a repaired belt is practically the same belt that it was originally, whereas a renovated belt may be constructed from parts of a dozen original belts.

ITALY'S FLOUR IMPORT TRADE.

Milan.—There is, it appears, no apparent predisposition in Italy to buy foreign flour, and the odds seem to be against any permanent trade for Canada in this commodity. During the years 1916-1919 a considerable amount of flour was imported into Italy, and in this Government business Canadian millers shared to some extent. In 1920, however, the import pendulum began to swing back into its normal position, and the opening months of this year afford further evidence that the Italian millers are re-establishing themselves on a pre-war basis. Prior to 1914 very little foreign flour was purchased by Italy, and such flour as was then imported arrived principally from Hungary. In the days of Government control, supplies of flour were required to supplement what otherwise would have been too little wheat, and Italy drew principally on the United States and Australia for these requirements, although in 1918 some 1,500 tons and in 1919 some 24,500 tons came forward from Canada. This, so it has been reported, was not always of the very best quality, but succeeded in making a favorable impression on the bakers on account of its whiteness and glutenosity. The market then for Canadian flour in Italy is not limited because this flour is unpopular, nor because some other quality is preferred. The fact is that no imported flour has normally found a ready sale.

If, however, Canadian c.i.f. quotations can at least parallel those of the flour offered in the local markets, once exchange becomes stabilized, some business could be done. It might be possible, moreover, to sell some best grade Canadian flour at normal exchange even at slightly higher prices than those quoted for first patents here.

The Duster

A merchant in a small western Canadian town had rejected a shipment of flour and refused to pay the draft. Whereupon the wholesaler wrote to different people in the town regarding him and also sent a letter informing him that unless settlement was made immediately, he would sue.

The reply the wholesaler got read as follows:

"I received your letter telling me that I had better pay up or you would sue. I am the railroad agent at Blankville and got the letter you sent him about me. I am the president and sole owner of the bank and can assure you of my financial standing. I am sole representative of the only paper published here as well as the trade papers. In addition I am the only flour merchant, jobber and mill representative in this vicinity and run the only bakery in town. As mayor of the city I hesitate to refer you to a lawyer as I am the only member of the bar in these parts and am also the justice of the peace. I am chief of the fire department and the only officer of the law in Blankville and if I were not also pastor of the Methodist church I would tell you to go to——."

Rufus Redd Dogg

"I see be th' papers," remarked Rufus Redd Dogg," thet ther is a turrible hot discussion on betune certain interests in th' west regardin' th' relative advantages an' disadvantages o' shippin' grain fr'm Fort William, Calgary an' elsewhere t' Vancouver, as agin shippin' fr'm these points t' Montreal an' St. John, N.B. Th' battle wud seem t' be goin' in favor av them boostin' th' eastern route as th' Minister of Railways is talkin' of strikin' a new rate fr'm Fort William an' Calgary eastwards thet 'll make shippin' via th' east more attractive.

"This may be all very well, but t' begin with th' National Railways thet's in a nice hole shud, it seems t' me try t' git all th' revenoo possible instead o' puttin' a premium on any one route f'r grain shipments. Agin, ther shudn't be anny discrimintin' between rates f'r different grain routes—th' discrimination on export flour shipments is discrimination enough at wan time. An' still agin, so long as we do hev t' ship grain t' other countries why shud Vancouver which is as Canadian as anny other city in th' Dominion be deprived o' a share o' th' national prosperity as reflected in th' movement o' grain particularly when it'll hev t' pay its shot t' help keep th breath o' life in the national roads?"

Before the war, Britain's imports of wheat and flour averaged 225,000,000 bushels annually. Returns show that in 1921 the imports were only 192,000,000 bushels.

THE MANUFACTURE OF

Grain Elevator Machinery

requires years of experience. We have made the equipment for over 3000 Elevators, which are scattered all over the three Western Provinces.

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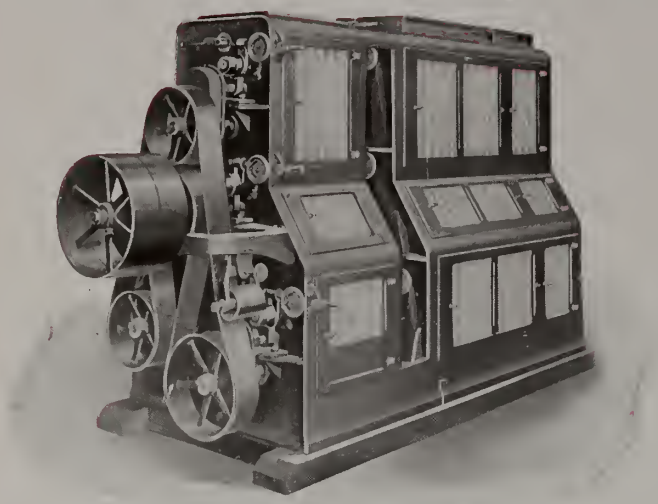

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△ △ △

PATENTED VIBRATING SCALPER SCREEN
under first break

△ △ △

SMALL AMOUNT OF POWER AND LABOR
required to operate

With the use of gears we maintain a constant and positive differential. Experience has taught us that by use of gears ONLY can this positive differential be maintained.

The VIBRATING ADJUSTABLE SCALPER SCREEN under the first break is an essential feature. It is found exclusively in MIDGET MARVEL MILLS. Its use in Canada is absolutely controlled by us through letters patent.

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Built entirely within cast iron frames, with planed joints, the MIDGET MARVEL is solid, substantial, rigid, and operates entirely without vibration.

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CANADIAN
Milling & Grain JOURNAL

VOL. III MONTREAL, MARCH 1st, 1922 No. 3

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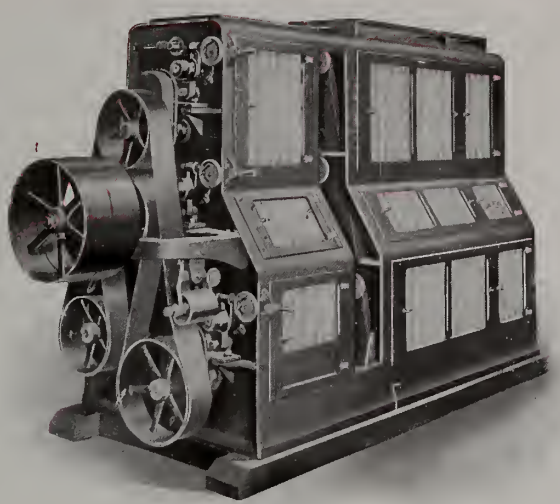

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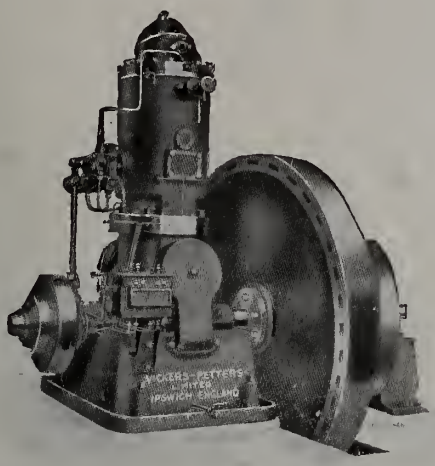

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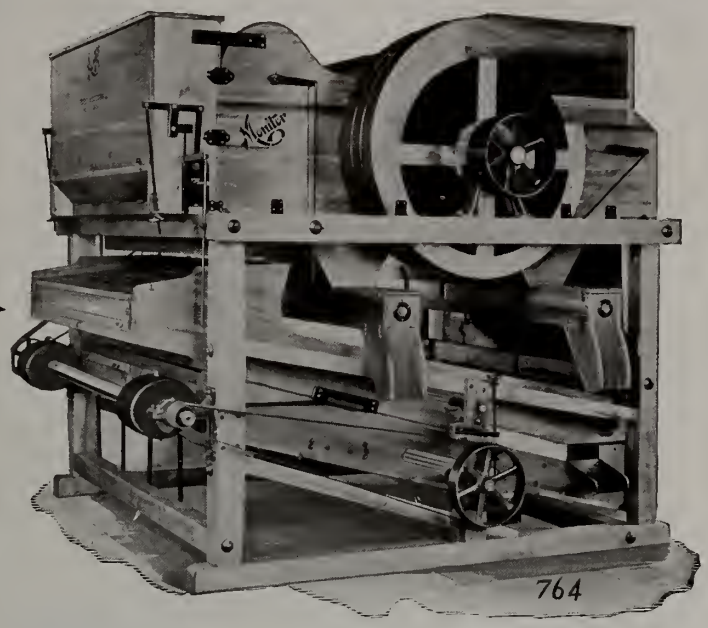

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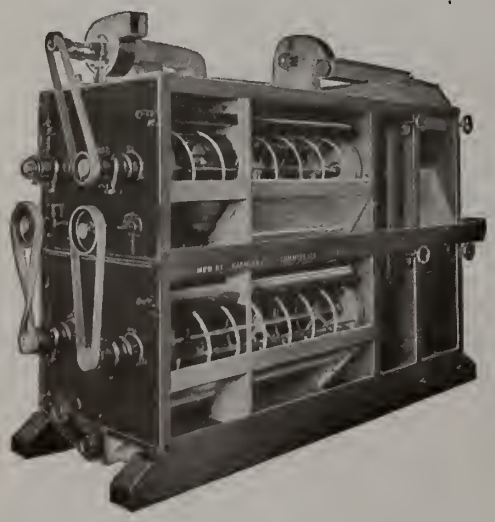

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VOL. III MONTREAL, MARCH 1ST, 1922. No. 3

CANADA'S ONLY MILLING AND GRAIN PAPER

Those Wheat Board Rumors.

THEIR efforts to establish a co-operative wheat "pool" having failed most dismally, the United Farmers of Manitoba, Saskatchewan and Alberta through the National Council of Agriculture are contemplating a swoop down on Ottawa to demand of the new Government the immediate restoration of wheat control. Synchronising with this news which emanates from Winnipeg comes word from the Capital that in conjunction with certain deliberations as to whether the Grain Trade Inquiry is to be continued by the old commission, or whether some new system of investigation is to be substituted therefor, the Federal cabinet has under consideration the advisability of going, like its predecessors in office, into the grain handling business through the medium of a Wheat Board.

Canadian Milling & Grain Journal has good reason to believe that pressure of the strongest kind is being brought to bear at Ottawa to induce the Government to give ear to the pleadings of the western grain growing interests whose mouthpiece is the Progressive party, for the re-establishment of wheat control. The intimation is that if the Government will restore control they can count on the practically undivided support in Parliament of the agrarian element, the not inconsiderable voting strength of which added to that of the old Unionist Government following might, on some important issue place the administration in a precarious position if indeed it did not force it out of office altogether.

The Government would do well to regard, "Hasten slowly," as a good motto in considering any proposals aiming at interference with the natural functioning and progress of a great national business. It would also be well for them to weigh carefully in the balance of their deliberations the mistakes of the old Wheat Board system and the evils resulting from its operation, one of the most pronounced of which was the almost complete demoralization of the Canadian milling industry and the all but total destruction of a flour export trade built up at tremendous cost both in effort and in money.

Should, however, the Government decide that some new system of national wheat marketing is desirable, such system should absolutely guarantee the milling interests a free hand in the conduct of their export business with an iron-clad assurance that such export business would not be imperilled by government made export wheat prices which would prevent them from competing in foreign markets.

The avowed intention of those in favor of wheat control or the establishment of a wheat marketing "pool" is the ultimate suppression of all the grain exchanges of the country, but this in view of the many years of valuable experience of which the present grain exchange system is the outcome is unthinkable.

If the Government which is now in power should so misinterpret its duty to the country as to permit of a reversion to the system of wheat control as that which prevailed two years ago it might just as well nationalize the Canadian coal, lumber, fishing, and other basic industries—in a word Sovietize the entire natural resources of the Dominion.

In conclusion it might be said that there is but little doubt that if the operation of a Wheat Board with powers such as that which existed was made the subject of proceedings before the Privy Council in England, that august body would pronounce it to be as illegal as was the Board of Commerce of painful memory.

Middlemen, Costs and Service.

THE ultimate distribution of goods, or merchandising, consists in furnishing the consumer the type of goods he wants, when he wants it and the way he wants it. It is a truism, that service counts for more than price. Convenience, credit, reputation of the goods all play a part in such transactions, and every element of service costs money; selling goods on credit, for instance. Abolishing the middleman is of course an idle dream; but curtailing cost by waiving service is fairly easy in most cases. Yet most people after saving part of every dollar, drift back into the old way because they want the service, with its convenience and credit. And they still have the privilege of railing at the middleman whose services they are willing to pay for, nevertheless.

A Conflicting State of Affairs.

STUDYING the matter in the light of evidence available the situation in Ireland would appear to easy of solution when compared with the complications which have arisen between the Federal and certain of the provincial governments in the matter of feedingstuffs, their manufacture, transportation and supply.

The Federal Government during the past couple of years have spent much time and money in an effort to abolish the practice of feeding screenings to

cattle. In fact, some of the live stock interests became so concerned regarding the health of their stock that they endeavored to legislate the milling industry into selling as feedingstuffs nothing but pure wheat feeds.

As a result of action instituted by the Canadian National Millers' Association however, a compromise was effected it being definitely shown that the mill run of re-cleaned screenings in feeds decidedly improved the feeding qualities of the same.

So far, so good. The air, however, was hardly clear before one provincial government in order to save the agricultural interests of the province, entered into arrangements with the railways under which were provided cheap rates on screenings from Fort William and the Bay ports with the object of providing a low price feed for livestock.

It is to say the least, difficult to believe that the Federal Government would advocate the doing away with the feeding of screenings in any shape or form, but nevertheless, while right in the midst of its hard work in this connection it has suddenly had to awake to the fact that a provincial government is operating in direct contrast with its efforts.

It would be interesting to know if any benefits have been derived from the cheap rates which also included United States corn and hay, and later dried beet pulp, or, whether the difference in rates enjoyed by the selected interests were not absorbed by them and the product sold to the farmer at the same price at which the grain man who is on the outside looking in made his sales. It would also be highly interesting to know just how the whole agreement has worked out since it went into operation.

Flour Handling Charges at Seaboard.

WHILE it is satisfactory to note that during the year 1921 exports of flour through the port of Montreal showed an increase of approximately 1,000,000 sacks compared with figures for the preceding year, it is becoming more and more evident that a matter which must be taken up without delay with a view to remedial measures being effected is that referring to the excessive charges loaded on to export flour shipments at seaboard. The question is one which has for long been the subject of much serious discussion, but if the Canadian flour milling industry is to be enabled to successfully meet competition in its efforts to establish and maintain a profitable foreign business, action must take the place of words and that immediately.

Despite the high importance of the flour milling industry to Canada it is indeed strange that the present methods of handling flour to seaboard for export do not differ materially from the system used hundreds of years ago.

Flour arrives at seaboard in railway cars in bags, which are unloaded into terminal warehouses, and held until a steamer is ready for them. The product for export is then unpiled and trucked, principally by hand labor to the vessel's side, where it is picked up in sling loads, a few bags at a time, and deposited in the holds of the vessels where it is stowed by man-power in ship shape for the voyage.

Flour on the Pacific Coast of the United States is conveyed from cars to warehouse and from warehouse to steamers or in some cases direct from mills to steamers by mechanical conveyors. Observation in European ports of cargoes loaded by such methods discloses that they arrive in first class condition, from a stowage point of view.

On the United States Atlantic coast there is but one port, Norfolk, Va., equipped with mechanical flour handling equipment which is proving of immense value to flour exporters. Incidentally, it was only after several years of sustained agitation that American millers secured the installation of this equipment which is now assisting them in reaching foreign markets to the detriment of the Canadian flour export trade.

Because of its flowing qualities which enables it to be loaded with the greatest simplicity and at minimum of expense railway companies and harbor authorities have spent large sums of money on expensive grain storage warehouses or terminal elevators and grain handling equipment, but not a dollar on any method which would facilitate the exportation of flour and thereby increase the supplies of feedingstuffs which are so urgently needed and which are so essential to the development of the livestock and dairying interests. Indeed, one might ask why should Canada throw away her natural resources in the shape of wheat by-products any more than she should export her lumber, her coal, her silver, or her livestock, without expecting to be paid for them?

The carriers' contention that they have given equal rates to grain and grain products is destroyed utterly by the discrimination at seaboard. Ocean carriers declare that they can load grain in much less time than they can load sacked flour and that they must, therefore, charge a higher rate on flour than for grain. It has been shown by demonstration at those ports in the United States at which mechanical flour handling equipment has been installed that flour may be stowed just as quickly and as economically as grain.

The difficulties already militating against the expansion of the Canadian flour export trade are all-sufficient without taking into consideration those which are bound to occur in the future when European countries get back to their normal milling operations, and therefore, all millers should unite upon a demand that carriers' terminals at seaboard be equipped with mechanical flour handling equipment, not next year or the year after, but now so that the present discrimination in that respect may be entirely wiped out.

Many mill owners would rather lose enough in their slipshod methods in one month than pay much for a correct flow sheet. If any thing goes wrong with the automobile how long will the owner allow it to run? Not long. Yet the same man, owning a mill, will allow it to rattle along with every joint out of order and give his miller fits because he fails to produce results.

Grain elevators cannot be wound up like a clock and set away to run. It requires constant attention and care. A choked elevator means, almost invariably, a fire.

Many people with untried marketing schemes mistake bats in the garret for the fires of genius.

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MONTREAL MARCH 1ST, 1922

THE MONTREAL MARKETS.

Flour.—The local flour market has been without any new feature to note. The demand from foreign buyers for spring wheat grades has been quieter and only a moderate amount of new business has been done for local and country account, consequently the market on the whole has been quiet, the undertone remaining firm in sympathy with wheat, and sales of car lots of first patents are being made at $8.50, second patents at $8, and strong bakers at $7.80 per barrel in jute bags, ex-track, less 10c per barrel for spot cash.

There has been no change in the condition of the market for winter wheat flour, business being quiet and prices firm. Car lots of choice grades are being quoted at $6.50 to $6.75 per barrel in second-hand jute bags, ex-track, and smaller quantities at $6.75 to $7 per barrel ex-store, with winter wheat patents at $7.50 to $7.75 per barrel ex-store, in cotton bags. The demand for white corn flour is somewhat limited, and prices are steady at $4.50 to $4.60 per barrel in jute bags, delivered.

Grain. — There has been a fairly good local inquiry from foreign buyers for all grades of Manitoba wheat, but as the prices bid were generally out of line, no business resulted. The demand for oats has been fair at 9d to 1s per quarter below the quotation exporters could accept, but sales of a few loads of barley were put through. A recent wire received from New York stated that sales of 1,250,000 to 1,500,000 bushels of wheat had been made for export account.

The demand from domestic and country buyers for cash grain in the local market has been somewhat limited, and business in this respect has been quiet, there being only sales of odd cars to meet actual wants, but the tone of the market has been firm, and prices have been maintained.

Millfeed.—The market for most lines of millfeed continues fairly active, there being a steady demand from both local and country buyers for supplies of which the offerings are now ample to meet all requirements, and sales of car lots of Manitoba bran are being made at $32.50, and shorts at $33, including bags, ex-track, while broken lots in mixed cars are selling at $28.25, shorts at $30.25, and middlings at $32.25 per ton, including bags, less 25c per ton for spot cash. Sales of pure barley meal are being made at $38 to $40, pure grain moullie at $38, and feed cornmeal at $35 per ton, including bags, delivered. The trade in rolled oats has been steady.

Baled Hay.—A fairly good trade continues to be done in baled hay for local and outside account, and as supplies were ample to meet all requirements prices have remained unchanged with sales of car lots of good No. 2 timothy at $28 to $29, No. 3 timothy at $26 to $27, and clover and clover mixed hay at $24 to $25 per ton, ex-track.

DISTRIBUTION OF CANADIAN FLOUR THROUGH BRISTOL CHANNEL PORTS

Bristol.—Canadian flour has a good hold on the flour import trade of the Bristol Channel ports, as elsewhere in England. So far as the Bristol import area, including the South Midlands, West of England and South Wales, is concerned, the chief entry ports for flour imports are Bristol and Cardiff. Unfortunately it is not possible to give general returns of flour imported into this district as a whole, as the importations are distributed over such a number of ports smaller than Bristol and Cardiff. However, figures for Bristol and Cardiff are available.

The imports of flour and meal into the port of Bristol during the last four years were:

	Long tons
1918	113,634
1919	57,392
1920	102,077
1921	27,946

At Avonmouth, where Bristol's main docks are located, there is ample warehousing in close connection with ocean steamers at quays fitted with electric cranes. This, together with excellent railway direct connections, gives quick despatch and economy in handling. Favorable inclusive rates are quoted either direct ex ship to railway, or via warehouse. There are both dock and private warehouses.

FLOUR EXPORT BUSINESS INCREASING.

The volume of flour export from Canada for the five months ending with January, aggregated 3,255,409 barrels as compared with 2,935,788 barrels for the corresponding period of the previous year. The United Kingdom has been the heaviest purchaser, taking in all over 2,000,000 barrels, as compared with about 1,100,000 barrels in the same time a year ago. United States purchases, however, fell from 707,212 in the five months period ended a year ago, to 286,220 barrels. Other countries took about 870,000 barrels as against over 1,000,000 barrels the 1921 period.

The following table gives the shipments of wheat flour from Canada during the five months ended with January, 1922, as compared with the five months ended with January, 1921:—

In barrels—	1922	1921
To United States	286,220	707,212
To United Kingdom:		
Via U. S. Ports	979,044	435,182
Via Can. Ports	1,110,732	651,403
To other countries:		
Via U. S. Ports	363,343	347,896
Via Can. Ports	516,070	794,095
Total exports	3,255,409	2,935,788

In the month of January, however, the export trade showed sharp falling off from last year, there being exported from the Dominion a total of 6,102,854 bushels as compared with 11,446,005 in January, 1921. Exports of wheat flour were slightly down, amounting to 631,821 barrels as against 703,641 barrels in the previous January.

Mr. C. B. Watts, of the Dominion Millers' Association, Toronto, was introduced on 'Change in Montreal recently by Mr. W. B. Wood, president and general manager of the Dominion Flour Mills Co., Ltd,

TRADE OPPORTUNITIES IN CARIBBEAN PROMISING FOR CANADIAN MILLERS.

That the existing predominence of Canadian flour in the eastern Caribbean will, during the coming year be repeated in the western colonies of the British West Indian islands is the opinion of Mr. G. R. Stevens, Canadian Trade Commissioner at Kingston, Jamaica, B.W.I., in an interesting letter to Canadian Milling & Grain Journal. Furthermore, Mr. Stevens believes that during the present year Canadian millers will be afforded exceptional opportunities of exploiting the flour trade of the Spanish American republics of South America.

"In view of the importance of the Canadian flour trade in the Caribbean," writes Mr. Stevens, "I shall request the Commercial Intelligence Branch of the Department of Trade and Commerce to subscribe to your periodical for me. I am extremely interested in the possibilities of flour for Jamaica and throughout the rest of my territory (I cover the entire Caribbean) and have a fairly comprehensive report in course of compilation. I have steady requests for flour connections and I believe that within the coming year we shall see the predominence of Canadian flour in the eastern Caribbean repeated in the Western colonies and that Canadian millers will be in an excellent position to attempt the trade of the Spanish American republics."

GRAIN GROWERS HELP STARVING RUSSIANS

Fifteen thousand sacks of flour, the gift of Western Canadian grain growers to the Armenians through the relief association, have been loaded at Portage la Prairie. They are being forwarded to New Orleans over the Great Northern Railway for shipment to Constantinople.

Appeals for aid for Armenia found a ready response among grain growers in Manitoba and Saskatchewan. Donations at elevators ran from 2 to 5 bushels a load, while many in sending carloads to the lake heads terminals gave instructions that 100 bushels of the car lot was to go to Armenian relief.

The grain dealers and elevator companies cooperated in the good work and on all donations allowed the full Fort William prices. The Great Northern is giving free transportation of the consignment to New Orleans.

The money value of the flour at the mill is $56,250, but the gift is of inestimable value to the people to whom it is going.

PREDICTS THAT VANCOUVER WILL BE GREAT GRAIN SHIPPING TERMINAL

Victoria.—A popular prediction in British Columbia business circles these days is that within two or three years two-thirds of the grain output of Alberta and Saskatchewan will be moving westward to Vancouver for shipment to the Atlantic seaboard by the water route through the Panama Canal or to the Orient.

Mr. C. P. Coles, shipping and grain broker of Vancouver, addressing the B. C. Manufacturers' Association recently, stated that this province was the natural gateway for the exporting of all of Alberta's wheat and half of Saskatchewan's, to say nothing of the grain produced in British Columbia. He said that inadequate facilities for handling the grain when once brought to the Pacific Coast were the one obstacle to the movement, and he urged that the elevator accommodation be immediately increased.

"We can save probably five cents a bushel by bringing it this way," continued Mr. Coles. "That would mean five million dollars saved in a season to Canada. But we must have equipment to handle it. Such a proposition at present is too big for private firms to undertake. It is a fair proposition for the government." It can easily be shown that the business is here, and calls for added accommodation. The general impression is also that elevator accommodation should be under one port authority, such as the Harbor Board."

Ocean freight rates, the speaker added, were important to this route. Today, via the Panama, the grain men were paying 30 shillings per ton. It was safe—with times and conditions gradually but surely approaching normal—to calculate on an average rate of between 30 and 40 shillings.

Mr. Coles urged that perhaps the first steps toward assisting the development of the export grain business would be the extending of the present accommodation of the government elevator, and the installation of additional equipment.

Medicine Hat, Alta.

Gentlemen,—We attach herewith cheque for renewal subscription to Canadian Milling & Grain Journal.

We assure you that it is our desire to see Canadian Milling & Grain Journal prosper, and we cannot but see that you have a great field ahead of you with liberal support from the flour mills of the Dominion of Canada. We believe in supporting Canadian products and will do all we can to support Canadian Journals.

Yours very truly,
ALBERTA LINSEED OIL CO., LTD.

THE CHICAGO MARKETS

The following table compiled from figures furnished by Messrs. Bryant Isard & Co., members of the Toronto, Stock Exchange and the Chicago Board of Trade, 84-90 St. Francois Xavier Street, Montreal, show highest price levels recorded on Chicago Board of Trade, from Feb. 13, 1922, to February 27, 1922, inclusive.

	Feb. 13	Feb. 14	Feb. 15	Feb. 16	Feb. 17	Feb. 18	Feb. 20	Feb. 21	Feb. 22	Feb. 23	Feb. 24	Feb. 25	Feb. 27
May Wheat	Washington's Birthday Exchange Closed	1.39½	1.41¾	1.42¾	1.39¾	1.40½	1.16½	1.47½	Lincoln's Birthday Exchange Closed	1.47	1.44¾	1.47¼	1.48¼
July Wheat		1.23	1.24	1.24⅞	1.22¼	1.23¾	1.27⅞	1.28¼		1.27½	1.25½	1.26	1.26⅛
May Corn		0.60¾	0.63½	0.63¾	0.63½	0.62¾	0.64	0.64⅝		0.66¼	0.66¼	0.68¾	0.69
July Corn		0.63½	0.65⅜	0.65⅝	0.65¼	0.64⅝	0.65¾	0.66½		0.68⅛	0.63⅛	0.70⅞	0.71⅛
May Oats		0.41⅜	0.43	0.42	0.42¼	0.41½	0.42	0.42¼		0.42½	0.42	0.43	0.43½
July Oats		0.43	0.44⅜	0.44⅜	0.43½	0.42¾	0.43¼	0.43½		0.43⅞	0.43⅛	0.44½	0.44¼
May Rye		1.07	1.07⅜	1.08¼	1.05¾	1.04½	1.09⅞	1.10		1.09½	1.07⅝	1.08⅛	1.09¼
July Rye		0.97	0.99	0.99	0.96½	0.96⅛	0.99¼	0.99¾		0.98	0.98	0.98¼	0.99½
May Barley		0.63⅞	0.64	0.64	0.64¼	0.64⅛	0.64⅛	0.66¼		0.66⅛	0.66½	0.66¾	0.67⅛

ONTARIO

TORONTO

TORONTO MARCH 1ST, 1922

THE TORONTO MARKETS.

Flour.—Several advances during the past two weeks have brought Manitoba top patents up to $8.50, with $8.00 for second patents. The market is still on the up-grade and further advances are looked for. There is no great buying movement, however. Ontario winter wheat flour is up to $6.75 to $7.00. The export business is somewhat better, particularly as to prices but the wheat market has been going up faster than the pace offered by the buyers of flour. Export prices range from forty-seven shillings and six pence to forty-eight shillings and eight pence, U. K. points and only a comparatively few buyers are following the market.

Rolled Oats.—There is a fair demand for rolled oats domestically, but there is very little export business offering. The present quotations range from $3.00 to $3.10.

Corn.—Corn is in fair demand and some transactions are taking place. No. 2 yellow corn is quoted at 70 cents, U. S. funds with the lower grades from a cent to a cent and a half less.

Oil Meal.—The market in oil meal is fairly strong and there is a very fair demand for the product. The prevailing price is $60, Toronto.

Millfeeds.—There is a keen demand for bran and shorts—especially the former, straight cars selling at $32.00 a ton, with white middlings at $36.00 and feed flour at $1.90. Screenings, which have been extensively used as feed this season have about run out and the advancing prices for pork are bringing the farmers into the market which is showing further signs of stiffening. There has been some export business but recent advances in wheat have put foreign buyers out of line somewhat and they are not in the buying to any great extent. The market, generally, however, is fairly strong and in a satisfactory condition.

THE GRAIN MARKET.

The grain market has been uniformly strong during the past fortnight, wheat moving up in a most encouraging manner. It is interesting to note that on Nov. 3rd last, No. 1 cash wheat closed at $1.02 and a recent high mark was $1.46. There are many producers in both Eastern and Western Canada who have not yet disposed of their last season's crops and they will substantially profit from the higher prices now prevailing. A fair export trade has been a factor in stimulating the advance but the strength of the market is mainly attributed to heavy speculative buying arising out of nervousness over the United States winter wheat crop. Millers, however, have not been large buyers on the up-turn. At present writing the quotation on the Toronto market for No. 1 Northern wheat on the bay port basis is around the $1.62 mark and considerable buying of Canadian wheat by Germany is reported. Local trade in wheat is somewhat quiet just now, but oats and corn are in good demand and dealers report receiving a large volume of enquiries for both grains. Ontario wheat remains somewhat scarce with millers reporting as high as $1.36 being paid for car lots, while some dealers state that $1.30 has been paid outside for commercial grades. The main difficulty in the way of the millers is that the export market is not favorable to high prices in flour, which makes it difficult for them to sell wheat at prices agreeable to Old Country buyers on the present basis of wheat.

MILLING ONTARIO WHEAT IN TRANSIT.

Toronto.—A feature of interest to the Ontario milling trade at present is that the railways are now allowing Ontario wheat to be milled in transit, at an extra cost of 1 cent per cwt. This means that Ontario millers can ship flour milled from Ontario wheat to the seaboard at the through rate from the original point where the grain was loaded, plus the extra charge of one cent.

PROMINENT MACHINERY SALES MANAGER

JAMES A. MILNE.

General Sales Manager, Canadian Allis-Chalmers, Ltd., Toronto.

OTTAWA REPORTS POSSIBILITY OF WHEAT BOARD BEING RESURRECTED.

Ottawa. — While consideration of the proposal has not yet reached that stage where it is possible to give any indication as to the course which may be laid down by the Government, it is understood that the matter of re-establishing a Canadian Wheat Board has been receiving serious attention at the hands of the Prime Minister and his colleagues. In the West the feeling is stated to be, at the present time, in favor of the re-establishment of such a board and the Cabinet is expected to reach a decision in the matter between now and when Parliament meets.

Together with the question of a Wheat Board the matter of continuing the grain trade enquiry is understood to be under consideration. One of the suggestions which has been put forward, it is understood, is that the grain enquiry shall continue, but that it will be carried on by a reconstituted board.

RAISING OAT CROP RESULTED IN LOSS.

Toronto.—That the oat crop raised in Ontario last year actually cost the farmers of the province more to raise than they secured from its sale, is indicated in striking manner by the results of the Acre-profit competition announced in Toronto recently by Hon. Manning Doherty, Provincial Minister of Agriculture. Young farmers from eight counties or districts in Ontario competed and only one, Mr. Cecil Luther, of Lennox and Addington, was credited with a profit, and then only $1.43. The next seven county winners ranged in losses on their acre from $1.05 to $5.45. The significance of the results may be understood when it is appreciated that on these acre plots particular effort is made to make a profit and returns would naturally be larger than on the average field of oats.

OFFER 8% PREFERENCE STOCK OF THE CANADA FLOUR MILLS CO., LTD., CHATHAM.

Toronto.—Messrs. Rice, Gibson & Company are making an offering of $250,000, 8% Cumulative preference stock of the Canada Flour Mills Company, Limited.

The company operates an up-to-date mill at Chatham, Ont., consisting of a grain elevator with a capacity of 150,000 bus.; a flour milling plant with a daily production of 750 bbls. and a complete corn meal mill with a production of 400 bbls. per day. This corn meal mill is the largest and best equipped mill in Canada. The company also owns and operates four other elevators, two in Kent County; one in St. Joachim and one at Tupperville. Properties, plants, equipments, etc., belonging to the company are valued at $607,604, against which is an issue of first mortgage bonds amounting to $150,000.

WHEAT CROP OF 1921 WAS BANNER ONE.

Ottawa.—The total yield of wheat in Canada for the year 1921 is now finally estimated at 300,858,100 bushels from a sown area of 23,261,224 acres, as compared with 263,189,300 bushels from 18,232,374 acres in 1920 and with 228,409,780 bushels from 16,967,561 acres, the annual average for the five years, 1916-20. The average yield per acre for all wheat in Canada is 13 bushels, for 1921, as against 14½ bushels in 1920, and 13½ bushels the five year average.

SIMPLE TEST FOR CREASE DIRT.

Here is a simple test for crease or similar dirt in wheat or other grain which is to be milled. Into one-half glassful of clear water, put a handful of grain to be tested and shake well. The discoloration of the water when held to the light will indicate the condition of such grain. Very often but little light is required to see that much dirt is present.

The success of many grain elevator operators in the operation of feed mills has been so pronounced that the wonder is every town does not support at least one grain dealer who has an up-to-date feed grinding and mixing plant. Most grain dealers have found that the installation of up-to-date facilities not only increased the income from their investment in elevator facilities, but gave them an outlet for much off grade grain and screenings which could not have been shipped to central markets to advantage.

TRADE OPPORTUNITIES

With a view to assisting the Canadian milling trade in the development of a permanent and profitable export business, "Canadian Milling & Grain Journal" publishes in each issue a selected list of trade opportunities, the investigation of which should prove of value. "Canadian Milling & Grain Journal" is taking special pains to ascertain the reliability of each opportunity presenteda nd will gladly furnish any further information regarding them that may be desired.

THE EDITOR.

No. 232.—Messrs. Huston & Newman, 15 Boulevard des Italiens, Paris, France, desires to obtain shipments of Canadian wheat and flour (No. 2 Manitoba, No. 2 Red Winter, etc.), for delivery during the present year; samples and terms requested.

No. 233.—Mr. B. Gregoir, 9 rue des Tanners, Anvers, Belgium, desires to extend his business with Canadian exporters of grains, flours, offals, and all kinds of oil seeds and oil cakes.

No. 234.—Messrs. Farquhar & Pearson, 47 Hope Street, Glasgow, Scotland, exporters and merchants of grain and cattle feedingstuffs, want to get in touch with some reliable and aggressive Canadian grain exporters.

WHEAT SHIPMENTS TO THE ORIENT

Saskatoon.—One hundred and fifty thousand bushels of wheat grown in the Saskatoon district were shipped to Shanghai and Yokohama during January direct from the Canadian Government elevators here by the McMillan Grain Company, according to Mr. L. R. Clarke, western manager of this company. This is the first consignment of this kind for Asiatic points to have been shipped from Saskatoon. The grain comprising the various shipments were sacked here prior to dispatch.

Last year only a small amount of Canadian grain was purchased by China and Japan, so that this is comparatively a new venture in the grain export fields. At the present time there are only minor facilities at Vancouver for the handling of grain—a Canadian Government elevator, and several small, privately-owned company elevators—but several grain companies are at present considering extensions at this point. There is no Pacific grain boat fleet, and this necessitates some extra labor in transportation, but even so, Mr. Clarke declared that grain could be laid down in Shanghai cheaper than in Great Britain. This was due to the fact that in a European shipment after leaving Fort William there are the additional lake and rail freight charges to contend with before the grain reaches its final Canadian point—the ocean shipping port.

The freight rate on grain for export at Harris, Sask., to Vancouver via Saskatoon, he quoted as 39 cents on the hundredweight; from the same point to Fort William it is 35 cents, but there is the additional lake and rail rate on top of that before the grain leaves St. John.

"A Pacific fleet of grain boats is one of the certainties of the future," Mr. Clarke declared, "and this new venture will go a long way towards pointing to the Far East as one of the big markets for the grain of the Saskatchewan farmer."

WESTERN PROVINCES

WINNIPEG

WINNIPEG MARCH 1ST. 1922

THE WINNIPEG MARKETS.

Flour.—The flour market in Western Canada has been more or less active of late, with a steady domestic demand and increased export business reported. As a result the mills have been kept fairly busy, with the larger ones running to about 75 per cent. capacity. The feature of the flour business has been the remarkable advance in wheat prices, not only in Canada, but throughout the world, and on the local market this advance in wheat prices shows a gain of over 40c per bushel since early in January to the end of February. Flour prices have been subject to three changes since the opening of February. At first there was a slight reduction, due principally to rather quiet business experienced by some mills and a consequent cutting of prices in the hope of increasing sales. On February 9th there was a general increase of 30c bbl., and again on the 16th prices were advanced another 20c. bbl. Shipping flour to fill export orders received from the east has fairly well cleaned out all stocks held by western millers, and orders now being received are sufficient to keep them busy. If the wheat market remains firm or goes higher, flour prices will have to be advanced again, because at the present level of $7.50 bbl. for first patent, flour is still out of line with and below the relative value of wheat. The reason flour prices have not reflected the full extent of the advance in wheat, is largely owing to the eagerness of many of the smaller mills for new business. The vital question now is whether the advance in wheat will hold. If it does, the prospects for a revival of flour buying on a larger scale are excellent, for stocks are certainly low as the buying throughout the winter has been of the hand to mouth variety, and little confidence has been shown by buyers in the stability of the market or that they would take on such a strong position. It may be two or three weeks yet before the real character of this change in the wheat market situation becomes apparent. A sudden decline just now would be demoralizing to the trade and would discourage the growers. On the other hand, if wheat prices are maintained at their present level or higher for another two weeks, the chances of their staying there for the balance of the crop year seem good, and a revival of milling and flour selling activity may be expected.

Present flour quotations are as follows: Top patent spring wheat flour, $7.50 bbl., in 98-lb. jute bags; second patents, $6.70; first clears, $6.10, delivered at any point between Fort William and the western boundary of Manitoba. Throughout Saskatchewan, prices are quoted 10c. less than above, and from Eastern Alberta to the Pacific Coast values rise progressively to $7.80 at Vancouver and like points. Vancouver Island takes $7.85 for top patents, and Prince Rupert, $8.00.

Millfeed.—The demand for millfeed continues active, and mills are finding no difficulty in selling all they produce to western buyers, and very little is available for shipment east, although there is a good enquiry from that quarter at higher prices. In the west the prices of millfeeds have been advanced $3 per ton, present quotations being: Bran, $22.00 ton, in bags, and shorts, $24.00 in bags, straight or mixed cars, cash, delivered f.o.b. Manitoba points.

Oatmeal.—The demand for oatmeal is limited and as a result competition is keen, and there has been no advance in prices notwithstanding that oat prices have made some advance.

Oil Meal.—There continues to be a fair demand for oil meal, although not a great deal of business is passing. The present price of oil meal, f.o.b. Toronto, Canadian funds, is from $52 to $54. The Buffalo price runs from $46 to $47.50.

Rolled Oats are selling at $2.50 to $2.75 per 80-lb. bags, and oatmeal at $3 to $3.25 per 98-lb. bags, delivered, Winnipeg territory.

There is no export trade at the present time.

Rye Products.—The market for rye products has been showing a little improvement, and both domestic and export demand is large. Owing to the advance of rye, flour prices are now 50c. higher than at last report. Best patent flour is selling at $7 bbl. in 98-lb. bags; medium, $5.80; dark, $4.50; rye meal, $4.50, delivered Winnipeg territory.

THE GRAIN MARKETS.

The market has been decidedly bullish and prices have advanced sharply. Every day throughout last month, with the exception of Friday, Feb. 17, when there was a reaction of 1¾c, prices have closed higher than on the previous day. On Feb. 1, May wheat closed at $1.16, and on Saturday, Feb. 18, the close was at $1.37⅞, an advance of practically 22c for the time stated. On January 3rd, May wheat closed at $1.06⅛, which marks an increase of about 32c in six weeks. Other markets have shown relatively the same strength.

Just what has brought about the complete change from the bearish situation that prevailed previous to the Christmas holidays has never been quite clear. The buying by Europe has, perhaps, been a little heavier, but there is still lots of wheat to sell on this side of the water. There have been reports, more or less unconfirmed, of a reduction in the prospective wheat supply. How far these represented genuine new developments and how far they simply expressed a realization of facts already known but not hitherto fully reflected in wheat prices, is uncertain. While the advance in wheat prices on the Winnipeg exchange and the leading exchanges of the United States, seem to have been primarily due to foreign strength, the persistence of unfavorable reports of the winter wheat crop in the United States has undoubtedly been an important factor. It is believed by experts who have been over the ground and others that these reports have been grossly exaggerated by important interests who had an object in sending prices to such high levels. It is believed that the true condition of the winter wheat crop is shown in the following dispatch received from a well-known crop expert at Kansas City: "There is no basis whatever for sensational reports about south-western wheat conditions, or stories of millions of acres abandoned. Continued lack of moisture is increasingly disturbing, but

wheat now is absolutely dormant and no different from two weeks or a month ago. Area of probable severe injury by drouth is largely limited to extreme western districts. Majority of acreage in central and eastern parts of hard wheat territory is in good shape to respond readily to favorable spring conditions. It cannot be maintained that general outlook is promising, but killing the crop now is idle and foolish."

The coarse grain markets have not been particularly active. Prices have ruled firm, largely in sympathy with the strength in wheat, but have not enjoyed the same strength, and oats and barley are considered cheap commodities today, compared with wheat.

CO-OPERATIVE WHEAT MARKETING

Regina, Sask.—A world-wide co-operative wheat marketing organization could be only feasible provided each country participating had national control of its own crops, according to Hon. J. A. Maharg, president of the Saskatchewan Grain Growers' Association. Hon. Mr. Maharg was discussing the report from Sydney, N.S.W., of a movement to organize a wheat marketing pool with the object of eventually controlling the Canadian, United States and Australian wheat crops, which he said he had never heard seriously discussed in Canada.

EXPERT MILL PEST EXTERMINATOR MEETS SUCCESS WITH NEW COMPANY

Pronounced success is rewarding the efforts of Mr. F. A. Thompson, the well-known Detroit expert on mill pest extermination, in the conduct of the Insect Products Company, 5105 Brush St., Detroit, which was organized by him some time ago.

Mr. Thompson is a pioneer in the matter of research work to keep mills clear of moth and weevil. Born in Ann Arbor, Mich., Mr. Thompson graduated from the state university there as a chemist. For 15 years he was connected with Messrs. Parke, Davis & Co., and for five years was assistant to Dr. A. B. Lyons, one of the leading chemists of America.

For some ten years Mr. Thompson was consulting chemist and it was during this period that he organized the F. A. Thompson Co., manufacturing pharmacists, Detroit, of which he was president and manager. Withdrawing from the company some months ago, Mr. Thompson started his new venture, which, as above stated, is meeting with marked success.

NEW CANADIAN MANAGER OF SCOTTISH CO-OPERATIVE SOC.

Mr. John J. Alexander has been appointed Canadian manager of the Scottish Co-operative Wholesale Society, in succession to the late George Fisher, whose sudden death occurred recently. Mr. Alexander was formerly a railway man and was placed

John J. Alexander

in charge of the Society's freight and claims department in Glasgow about 15 years ago. At one time he superintended the Society's grocery warehouse in Glasgow, one of the largest concerns of its kind in Scotland. Mr. Alexander will make his headquarters at Winnipeg.

WILL DISCUSS GRAIN HANDLING.

Vancouver.—Local harbor problems, including the grain handling question and Vancouver's capacity for handling prairie grain at this port, will be discussed at a forthcoming meeting of the Vancouver Board of Harbor Commissioners with Mr. A. E. Warren, general manager of the Canadian National Railways, who is at present in the city on business connected with the Canadian National.

THE WESTERN MARKETS

The following report furnished by Messrs Baird and Botterell, 103 Grain Exchange, Winnipeg, shows daily highest price levels from Feb 13, 1922, to February 27, 1922, inclusive

	Feb 13	Feb. 14	Feb. 15	Feb. 16	Feb. 17	Feb. 18	Feb. 20	Feb. 21	Feb. 22	Feb. 23	Feb. 24	Feb. 25	Feb. 27
May Wheat	1.33	1.34½	1.36½	1.38½	1.36	1.37⅞	1.44⅞	1.46⅜	1.44⅜	1.45	1.42⅞	1.44⅛	1.45⅛
July Wheat	1.29½	1.30½	1.30½	1.32½	1.29¾	1.30⅝	1.37	1.38⅛	1.37	1.37	1.35½	1.37	1.37½
May Flax	2.42½	2.45	2.44⅝	2.46½	2.37½	2.39	2.46¼	2.46⅞	2.40⅝	2.45	2.43¾	2.44⅞	2.45¼
July Flax	2.44	2.46	2.44½	2.46	2.37	2.39½	2.46¼	2.46½	2.40½	2.43½	2.41½	2.42½	2.43⅛
May Rye	1.06	1.07⅝	1.07⅜	1.07⅝	1.05	1.04⅝	1.09	1.09¼	1.08½	1.09	1.08½	1.08⅝	1.09
July Rye	1.02⅞	1.02⅞	1.04	1.04	1.04⅛	1.04	1.05½	1.06	1.06	1.04¼	1.04½	1.05¼	1.05⅞
May Barley	0.65⅝	0.65⅝	0.66⅛	0.65½	0.66	0.67½	0.67	0.66⅞	0.67½	0.67½	0.67¾	0.68¾	0.68⅞
July Barley	0.64⅛	0.63½	0.63½	0.63½	0.64¼	0.64⅛	0.65	0.65⅛	0.65½	0.65⅝	0.65½	0.67	0.67¾
May Oats	0.49⅛	0.49½	0.50⅜	0.50⅝	0.50	0.50	0.50¾	0.50¾	0.50⅜	0.50⅜	0.50¼	0.50¾	0.51⅛
July Oats	0.18⅜	0.18⅜	0.19¾	0.49⅞	0.19⅛	0.49⅛	0.49¾	0.49⅞	0.49⅜	0.49½	0.49¼	0.50⅛	0.50⅜

Foreign Flour and Grain News

Although since the first of the year cash wheat has been advancing in price until to-day it is quoted at approximately 40 cents per bushel above the level recorded around the beginning of the year, Canadian millers made no move in the direction of price revisions until two weeks ago when an increase of 50 cents per barrel was announced. This, in view of a rapidly rising wheat market, was followed a few days later by another half dollar per barrel raise, so that at the present time first patents are being quoted at $8.50, second patents at $8, strong bakers at $7.80, in jute bags, ex-track, less the usual discount for spot cash. With regard to export trade a moderate amount of new business has been done of late, but generally speaking, the market has been quiet. Inquiries for Canadian spring wheat flour from Denmark and Norway, and from which it is possible some business may result have been a late feature of the export situation. The winter wheat market shows little if any improvement with prices remaining firm at $6.50 to $6.75 per barrel for choice grades, patents at $7.50 to $7.75 per barrel and white corn flour at $4.50 to $4.60 in jute bags, delivered.

Canadian exports of wheat during the past few months have been of fairly satisfactory proportions. In fact, for the five months to the end of January, 1922, a total of 98,125,031 bushels of Canadian wheat had been shipped out of the country for the export market as compared with 92,786,811 in the corresponding period ended January, 1921. Shipments to the United Kingdom have been particularly heavy, and have amounted in all to 70,800,000 bushels, of which 12,270,000 bushels have been shipped from Canada direct, and the balance through United States ports. In the same period of last year shipments of grain from Canada to the United Kingdom reached a total of 18,000,000 bushels only, of which 3,300,000 bushels passed through Canadian ports.

This large increase in shipments of Canadian grain to the United Kingdom offsets the heavy decline which has taken place in shipments to the United States, these, in the five months amounting to only 9,400,000 bushels, down from 35,000,000 bushels in the corresponding period of the previous year.

The figures clearly indicate that while Canadian grain producers have lost, to a large extent, their market in the United States through the effect of the Fordney Tariff, they have more than made up lost ground in their export trade with other countries. Apart from shipments to the United Kingdom, Canada, in the past five months has been able to export something like 18,000,000 bushels to other countries, but this total is down from about 41,000,000 bushels in the same period a year ago.

ROUMANIA.—Fairly heavy falls of snow have recently been experienced, which will, of course, be beneficial for the autumn sown crops. The severity of the weather has made further sowing of wheat impossible, and this year's crop will be much smaller than the disappointing outturn of 1921.

INDIA.—The latest report of the Director of Commercial Intelligence, Calcutta, states that with the exception of the eastern districts of the Punjab, where more rain is wanted, prospects for the growing crops are good throughout India. Good rains have fallen over the Punjab, the United Provinces, and the Central Provinces, a circumstance which renders the crop situation highly satisfactory.

AUSTRALIA.—There is no further news regarding the wheat outturn. Fine weather is favoring threshing. Recent advices report extensive Japanese buying of new crop wheat, the average price realized being about 4/10½ (0.90) per bushel at Melbourne.

ARGENTINE.—Fine weather has been experienced throughout the past week. Yield and quality of wheat is good, but on the other hand, confirmation has been received of the bad quality of linseed.

FRANCE.—Rain and snow have fallen alternately of late, to the benefit of the growing crops. Wheat and oats are reported in splendid condition throughout the country, although the weather is, perhaps, a little too severe for the late sown wheat. Reserves of moisture are now reported about normal.

ITALY.—Confirmation is to hand of good falls of snow in Northern Italy, while in other parts general rains have been experienced. Growers are more optimistic regarding the new crops, and hopes of a normal harvest are now being entertained.

JUGO-SLAVIA.—There is no surplus of wheat this season. In the Banat the outturn was lower than anticipated, while a poor crop was also harvested in the Bacska.

NORTH AFRICA.—Advices continue to be of an unfavorable character, and the possibility of the acreage under crop this year equalling tht of last season, is now remote. The condition of the growing crop leaves much to be desired.

SOUTH AFRICA.—Some damage was caused to both wheat and maize by excessive rainfall, towards the end of January; however, most districts of the Transvaal and Orange Free State report very hopefully of a good wheat harvest.

BULGARIA. — Unfavorable weather conditions have prevented sowing on some of the land intended for winter crops.

JAPAN.—Sowing was carried out under normal conditions, favorable growing weather being subsequently experienced.

GREAT BRITAIN.—There has been a steadier undertone in home milled flour, and the tendency in some districts is firmer. In London quotations are 1/- (0.23) dearer, but at Liverpool values are about unchanged for the lower grades, and occasionally 1/- (0.23) lower for top grades. There is, however, a general improvement in the demand from bakers. The foreign flour market is quiet, although quite recently good sales of Australian afloat were reported at around 36/6 ($8.40). At the moment, Australian flour shippers' quotations range from 37/- ($8.51) to 38/- ($8.74). Parcels of ordinary Manitoba export patents are offered at 42/- ($9.50) c.i.f. February clearance from the seaboard and top grades are held at 44/- ($9.96) to 45/- ($10.19).

Seed Department

CONDITIONS IN SCOTCH AND IRISH FLAX MARKET SHOW STEADINESS.

Glasgow.—The flax-spinning industry in Scotland is still rather dead, and there is little chance at present of sales of any Canadian flax or targed tows on this account, because of the easier tendency of Russian flax prices. Later in the New Year it is hoped that things will take a turn for the better. If this is realized, and the flax-spinning mills speed up production even to half capacity, there will be an acute shortage of raw material.

As regards Ireland, the improvement in the industry apparently continues, but Belfast is concerned with the light industry, which uses much less material than the heavy industry in Scotland. Belfast spinners still find Irish flax as cheap as anything else, but if Canadian flax producers are willing to take a moderate price something may be done even now.

As regards present prices, it is impossible to give any idea as to what Ontario flax would realize here until it is submitted to inspection on this side by possible buyers. Best Blue Dutch can be bought at £135 ($710) per long ton c.i.f.; that is 27 cents a pound delivered at the docks at Dundee or other port; lower qualities of Courtrai at £120 ($540) c.i.f.

Irish flax is being marketed rapidly this season, and in November more than 1,000 tons were brought to market. The yield has been small, but quality is better than last year. The same description applies to Russian flax. As regards Russian prices, there are no buyers just now, but it can be bought roughly £20 ($90) cheaper than a month ago. Livonian R was selling recently at £117 ($528) c.i.f. This is the top mark of a good average water-retted district. The prospects of Canadian flax fibre in this market, including Ireland, depend upon whether or not Canadian exporters can meet and continue to meet prevailing prices.

SALES OF SASKATCHEWAN SEED OATS

Regina, Sask.—Between seventy and eighty thousand bushels of 1 C.W. seed oats have been sold recently by the Department of the Dominion Seed Commissioner, Mr. A. E. Wilson.

The department lately filled an order for 20,000 bushels of oats to a Quebec consignee. Close to 60,000 bushels of oats have been disposed of in Manitoba and Saskatchewan. An order for 1,000 bushels was also shipped to the United Farmers' Co-operative Association, Ontario.

Mr. Wilson states that all of the shipments sent forward since the first of the year, are drawn from the reserve of seed oats held over from the 1920 crop season. At that time he purchased on behalf of the department.

Regina, Sask.—In the production of flaxseed in the Dominion, Saskatchewan led all other provinces with a yield of 3,500,000 bushels during 1921. Manitoba produced 540,000 bushels; Alberta, 135,000; Quebec, 97,200; and Ontario, 92,000. Very little flaxseed, if any, was grown in the Maritime Provinces and British Columbia.

The Modern Sophocles

You may measure a man by his wants. The poor plodder has few wants, expects but little, and generally gets no more than he expects. The successful man has many wants — good home, good clothes, good company, wealth, power and fame. Now, these many wants are not the outgrowth of his success, but the cause of it.

The satisfied man never gets anywhere. Nations whose standards of living are low are sluggish and backward. Nations which have reached the state of development which demands good things in many varieties are the progressive and successful ones.

By wants—not wishes—although the wish is father to the want; but a desire so strong that its owner will willingly pay the price for it; by work, by thrift, by self-denial and suffering. It is such wants as these that keep man and nations moving forward and upward. Human wants are back of all human progress, and the moment that wants stop increasing in number and variety, progress ceases.

FLAX FIBRE GERMINATION TEST

An official Dominion Government report has just been received on a germination test of flax fibre producing seed derived from a crop grown on irrigated lands at Tilley, Alberta, some 120 miles east of Calgary.

This crop was itself produced from the seed yields from a small experimental plot of fibre flax which was grown in that locality in 1920. The experiment was made in order to demonstrate the possibilities of the flax fibre industry in Western Canada under conditions of irrigation.

The Government report on the germination of the flax seed produced in 1921 states that a four-day germination of this seed is a record for all Canada, and a ten-day germination is the highest average of the year, the tests being given as—

Four-day 75%
Ten-day 97%

Good quality fibre seed of high germination is in demand in Europe, and the results of this official test indicate that seed produced in Western Canada will be preferred in that market.

It is now being arranged to make a sample shipment of this Western Canadian seed, sufficient to plant at least 25 acres, to Ireland, and the results of the crop obtained from it will be carefully noted.

This matter is being handled through the co-operation of the Canadian Pacific Railway Company and the Department of Agriculture Flax Fibre Division of the Dominion Government.

Fort William.—The whole of the board of grain commissioners was away from the city recently, Chairman L. H. Boyd, K.C., having left for the east, whither Commissioner Jones preceded him, while Commissioner Staples is in Winnipeg.

The Elevator Operator

WESTERN GRAIN HANDLING INTERESTS WATCHING WHEAT BOARD PROPOSALS.

Now that the organized farmers of Manitoba, Alberta and Saskatchewan have passed resolutions, almost unanimously, in favor of the re-establishment of the Canada Wheat Board, the Canadian Council of Agriculture will take steps to bring the matter before the Dominion Government. It is expected a delegation will be sent to Ottawa to present the views of western farmers on the question, and an effort will also be made to secure the support of western Progressive members of parliament.

The course to be followed marks the final step in the agitation for the recreation of the Wheat Board which commenced early last year.

Just what steps the grain trade will take to prevent the restoration of the Wheat Board has not been decided, but the situation is being watched closely, and a stiff and prolonged fight may be looked for if the government give in to the pressure from the farmers. It is believed here that the re-establishment of the Canada Wheat Board would be ultra vires.

WEIGHT OF WHEAT IS AFFECTED BY ATMOSPHERIC CONDITIONS.

In connection with the work of a sub-committee appointed by the New South Wales Advisory Council of Science and Industry to inquire into the question of weevils in wheat, it was thought desirable to ascertain to what extent the moisture content of bagged wheat varied with the changing moisture content of the air. The conclusions arrived at were that wheat harvested under hot and dry conditions rapidly increases in weight when brought into a cooler and moister atmosphere; that subsequently variations in weight are slight and vary generally with the atmospheric humidity; that the variations in weight of bagged wheat harvested under hot and dry conditions and stored in a cooler and more humid atmosphere do not exceed one per cent over a period of two years; and that after the wheat has been stored for two or three weeks and has adjusted itself to the new conditions, the variations in weight are much less. The experiment was carried on at Sydney over a period of nearly two years, and it is noteworthy that the weight of the wheat followed fairly closely nearly all the rapid changes experienced in the state of the atmosphere.

GOVERNMENT TO ENQUIRE INTO WORKING OF CANADA GRAIN ACT.

Ottawa.—The whole question of the operation of the Canada Grain Act is to be looked into by the Government and incidental to it will be the position of the members of the Grain Commission. Messrs. Leslie H. Boyd, K.C., chairman, W. D. Staples and J. P. Jones. The commissioners are appointed for ten year terms and Mr. Staples' term expires this spring. Whatever is done with the others, the intimation is that he will not be reappointed.

The constitutionality of the Grain Act may be the subject of reference to the Supreme Court especially in view of the western farmers' demand for such action. A case already in progress is said to involve the constitutional aspect and this may be made a test.

Complaints are also fruitful in regard to the system of inspection and the best method and the place of conducting it will be looked into. No definite conclusion has yet been arrived at, but it is very probable that the Act may be somewhat extensively overhauled if its constitutionality, which admits of question, should be upheld.

Investigation into the grain trade by Royal Commission is not likely, but the grain board may be asked to conduct it.

COMPARATIVE COST OF UNLOADING BULK AND SACKED GRAIN SHIPMENTS.

Recent investigations as to the comparative cost of unloading bulk and sacked grain from railroad cars show that it costs over four times as much to unload a car of sacked grain as it does to unload a car of bulk grain, and three times as long. The distribution of the average time required to unload the cars and the average costs is shown in the following table:

	BULK*		SACK**	
	Minutes	Cost	Minutes	Cost
Spotting car ...	3.4	$0.153	1.5	$0.078
Breaking out ...	11.0	.245	2.5	.10
Handling grain .	21.0	.602	116.4	4.65
Cleaning out car	10.2	.452	26.0	1.04
Totals	45.6	$1.45	146.4	$5.87

*Average tonnage per car, 40.8.
**Average tonnage per car, 40.1.

The figures given include the time required and cost of unloading the cars only, and do not include the time or cost required for elevating or weighing the grain in the elevator. The costs were figured on the basis of labor charges at 80 cents per hour and power charges at 1½ cents per horsepower per hour. Power was used in spotting the cars at the elevator and in working the power shovels when unloading bulk grain.

DEFECTIVE ENGINES IN ELEVATORS.

Too many elevators are burning from backfiring, leaky gasoline and oil engines. One can well understand why an elevator man does not care to make extensive repairs in these days of varying business conditions; but this trying to run an elevator with crippled machinery is not only poor economy; it is positively dangerous.

If there is anything the matter with your engine, get it fixed now. Don't wait for a week or a month. If you do it will probably not need any help from you. It is discouraging to have to pay a loss of five or ten thousand dollars that could have been prevented by the expenditure of five dollars and an hour's time.

Another thing—Water will not handle an oil fire. In fact, it will spread it. A reliable hand extinguisher should be an essential item of equipment in the engine room of every elevator.

Well-known Ontario Mill Increases Its Capacity.

To any one interested in the milling industry, a visit to the mill owned and operated by Messrs. E. Pitts & Son, Paris, Ont., is well worth while. The building, which is of substantial brick and stone construction, sets back from the main street a suitable distance to give a pleasing appearance and provide ample room for the rigs or trucks of customers. On one side it is flanked by a small civic park, and on the other by the River Nith. While not built expressly as a mill building, the machinery has been installed in such a manner as to make everything neat and convenient.

On the first or ground floor, each in its individual room, will be found the office, retail department, a 24-inch Robinson Attrition Mill, Oat Roll, the grain cleaning and tempering machinery, and the electric motors. On the second floor is a 50-barrel Marvel Flour Mill, also in a room by itself.

All feed is packed on the ground floor, the flour may be packed on either the ground or second floor.

Messrs. Pitts & Son's Mill at Paris, Ont.

Mr. E. Pitts, senior member of the concern, has been a miller all his life, having milled in some of the best mills of this country as well as England, the land of his birth. Mr. Pitts' sense of humor adds greatly to the enjoyment of one's visit. His fund of reminescences, especially concerning mills in which he has been employed, and little "wrinkles" which he has worked out, is almost limitless.

Even the manufacturers of the Midget Marvel could not ask for a more enthusiastic user of their product. A 25-barrel mill of this design and type was first installed in a much smaller building at Paris some eight years ago and in 1921 the 50-barrel Marvel mill was substituted in order that the firm's capacity might be increased.

The enviable reputation which has been gained by Messrs. Pitts three brands of flour, is a matter of considerable pride to the makers. "White Rose" is the pastry; "Cook's Pride" a blend of Ontario Winter and Manitoba Wheats; and "Premier" a high class product of No. 1 Northern Wheat.

Saskatoon, Sask.—Archie Dale, a mill employee of the Western Flour Mills at North Battleford, Sask., was whirled to death recently when his clothes caught in the flywheel of a gas engine. It is believed Dale suffered from a heart attack and fell into the revolving machinery.

NEW ORDER WILL BENEFIT WESTERN MILLS

Winnipeg.—Flour mills in Canada, west of Fort William, Ont., will, it is said, save $350,000 yearly as the result of the decision of the Railway Commission, reported in full elsewhere in this issue of Canadian Milling & Grain Journal, requiring the railways to continue the 1c charge per 100 lbs. for milling in transit, storage and cleaning of grain. The decision puts an end to the effort of the railways to increase the charge from 1c to 2c per 100 lbs. The tariff has been suspended since November, 1918, pending an investigation, and now the tariff prepared by the railways will never go into effect. The railway claimed the extra cost was necessary owing to the increased switching involved. The Canadian National Millers' Association said it was offset by the increased loading in the cars, and with this the commission agreed.

Calgary.—Between seven and eight thousand tons of wheat have been inspected in Calgary recently, all of which has been shipped to the Pacific Coast. This has created considerable surprise to local grain men, who were under the impression that coast shipments were now practically at an end. As a matter of fact, they represent as large a westward movement as at any time during the season.

OBITUARY

Sincere regrets were expressed by the members of the Winnipeg Grain Exchange recently when news of the sudden death of Mr. George Fisher, Canadian manager of the Scottish Co-operative Wholesale Society, Ltd., was announced by vice-president Craig. The late Mr. Fisher was in his 59th year and had been suffering from heart trouble since the beginning of the year.

The late Mr. Fisher was born in Lanark, the county town of Lanarkshire, Scotland, and had been a resident of Winnipeg for the past fifteen years.

When the Scottish Co-operative Society, Ltd., decided to establish a branch in Canada in 1906 it chose Winnipeg as the logical place for headquarters and George Fisher as the best man among the thousands in its employ to start the venture in the new land. The choice was justified fully. The branch, started in a small suite of offices in the Grain Exchange, has broadened into a great business with a line of elevators of its own, and more recently it has expanded into a practical farming scheme, instituted on approximately 10,000 acres near Rosetown, Sask.

Mr. Charles H. Whelpley, manager of the Western Terminal Elevator Company, died at his home in Winnipeg from pneumonia recently. The late Mr. Whelpley was very well known in Fort William, where he was a frequent visitor upon business relating to the company's big terminal elevator there. Mr. J. H. Irwin, manager of the Western Terminal Elevator at Fort William, was in Winnipeg at the time of the death, and represented the Fort William employees of the company at the funeral, which was very representative of the western grain handling trade.

INCREASES IN OUT-OF-LINE HAUL CHARGES ORDERED SUSPENDED

An order of far-reaching importance to millers and grain men interested in the milling-in-transit privileges on Canadian railways has been issued by the Dominion Board of Railway Commissioners, following a recent application of the Canadian National Millers' Association and the Dominion Millers' Association, for an order suspending the tariffs, or supplements to the tariffs, filed with the Railway Board in pursuance of its general order of January 4, 1922, increasing the rates for out-of-line haul on western grain milled in Eastern Canada

The order as issued by the board provides that, "The tariffs, or supplements to the tariffs, filed by the railway companies in accordance with the requirements of general order No. 354, January 4, 1922, insofar as such tariffs, or supplements to tariffs, increase the charge for out-of-line haul on western grain moving all rail or lake and rail to milling points in Eastern Canada, be, and the same are hereby suspended from their effective dates, with leave to the said railway companies to apply to the board for an adjustment of rate, if necessary."

Concludes Prolonged Argument.

This ends a prolonged argument before the Railway Commission on this point. In his judgment on which the order was based, Hon. Mr. Carvell said:

"During the hearing of all phases of the milling-in-transit case since I have been a member of the board, and from reading all the evidence and correspondence before that date, the question of the out-of-line haul on grain for milling purposes was never mentioned or even thought of, and therefore when writing the judgment in the "Milling-in-Transit" case a few weeks ago, it was not my intention in any way to interfere with the existing rates for the out-of-line haul.

"My only object in introducing the subject in the judgment was that there should be no misunderstanding as to the fact that the milling-in-transit fee should in no way interfere with the out-of-line haul charge, and to leave the door open by which the railway companies could file reasonable rates for the out-of-line haul on Ontario and Quebec grains, because, as I understand it, heretofore there has been no such thing as an out-of-line haul on these grains, it being simply a rate in and a rate out.

Millers Can Apply for Change.

"Now that Ontario and Quebec grain is enjoying the milling-in-transit privilege, it naturally presupposes a new tariff, giving the through rate, plus the 1 cent stop-over charge for milling purposes, and, therefore, without expressing my opinion as to whether the tariff filed for that particular business is fair or not, some tariff must be provided, and I think that portion of the tariffs filed, effective the first day of February, 1922, namely, that applying to Ontario and Quebec grain for milling-in-transit purposes, should be allowed to remain, with leave reserved to the millers, or any interested party, to apply to the board for a change. No great injury can be done to any party by this arrangement, because in a telegram from the Dominion Millers' Association, dated Feb. 9th, it is stated as follows: 'No Ontario grain moving, as crop practically all marketed, so statistics asked valueless.'

"It was never my intention, however, that the railway companies should in any way interfere with existing out-of-line hauls, which, of course, would affect all Western grains, and I do not see how such an interpretation could have been properly applied to the words quoted, and even if such interpretation could be justified, I do not think the companies would be justified in filing a rate effective on a given

HON. F. B. CARVELL, K.C.
Chairman of the Board of Railway Commissioners for Canada who wrote the order suspending the putting into effect of increased out-of-line haulage charges.

date without giving the public an opportunity to investigate.

The Railway Board's Ruling.

"Therefore, in my opinion, so much of the tariffs above referred to as applies to the out-of-line haul on Western grains, should be suspended as of the first day of February, 1922, with leave to the transportation companies to apply to the board for an adjustment of rates, if same be necessary."

This judgment was signed by Hon. F. B. Carvell, K.C., Chairman of the Board of Railway Commissioners, and agreed to by the other commissioners.

MACHINERY FOR SALE

To close an estate, the following used milling equipment: one 4 foot French Burr wheat stone, for cornmeal or Graham flour; one Eureka Perfection milling separator, 25 bus. capacity; one Hagenmacher Plansifter; one Beall wheat polisher No. 1; one cylinder cockle machine, 25 bush. capacity; one cornmeal purifier; one power bran packer No. 7, style C, Goldie & McCulloch; one Eureka separator and double scourer, Howes Co., 25 bus. capacity; two Greey flour packers; water wheels, etc. This machinery must be disposed of at once, and may be seen at Cornwall, Ont., by applying to Mr. H. W. Snetsinger, Box 760, Cornwall.

Elevator, Mill & Personal Notes

Midland, Ont.—The new mill of the Copeland Flour Mills, Limited, is expected to commence operations this month. Already orders for 20,000 barrels of flour, chiefly for export, are on hand. The directors of the company are: Messrs. James Playfair, president, Great Lakes Transportation Company; D. S. Pratt, vice-president, St. John Drydock & Shipbuilding Co.; D. L. White, president, Midland Shipbuilding Co.; A. E. Copeland, president and managing director Copeland Flour Mills, Limited, and F. W. Grant.

Toronto.—The Toronto milling and grain trade have been advised that the flour mills in Woodstock, Ont., of Messrs. Cullen & Sons, have been closed down for an indefinite period. The reason for the cessation of operations is reported to be the falling off of export trade. This is the first time in the past three years that the mill has closed down, it having been operating night and day. A few men are retained in the meantime looking after the custom trade. The Cullen mill is one of the best known in Ontario. An early resumption of activity is anticipated.

Kemptville, Ont.—Damages of $26,840 are being claimed by the Kemptville Milling Company, Ltd., from the village of Kemptville because of construction, maintenance and operation of hydro-electric lines within the municipality. Hydro recently entered the village, where power was previously provided by the milling company.

Vancouver, B.C.—A full-fledged grain exchange, holding daily sessions on the floor, has been established by the Vancouver Merchants' Association. The exchange posts cost prices for Western grains. The total bookings since the grain began to pass through Vancouver is now 4,954,296 bushels, of which one-third was for the Orient, and the balance for Europe.

Coronation, Alta.—Mr. Geo. A. Dafoe is installing a 50-barrel XXth Century Flour Mill in his milling plant.

Sherbrooke.—Serious damage was caused by a fire which broke out at North Stanbridge when the grist mill, operated by Mr. Ernest Bomnoe, was burned to the ground.

Bradwell, Sask.—The State Elevator Company propose building as soon as possible to replace the elevator destroyed by fire recently. The new building will be up-to-date in every detail and fitted with the newest equipment.

Stettler, Alta.—Mr. William Drewes has started the installation of a 50-barrel XXth Century Short System Flour Mill.

Galt, Ont.

Gentlemen,—Please find enclosed cheque for $3 which will keep me good on your books for a year. I value Canadian Milling & Grain Journal very much.

Yours very truly,
W. T. CURLISS, Millwright.

Mr. J. Johnston, of Simcoe, manager of the Norfolk Co-Operative Company, and well-known in grain circles in Ontario, was a visitor to Toronto recently.

Mr. Robeson, of Robeson & Roberts, bakers and grain dealers, Maple, Ont., called on the milling trade in Toronto recently.

Mr. H. J. Hodgeson, grain dealer, of Trenton, Ont., spent a few days in Toronto recently.

Mr. T. Bowerman, baker and grain dealer of Picton, was a caller on the milling trade in Toronto a few days ago.

Mr. Daniel McKay, superintendent of the N. M. Patterson elevator at Fort William, has left, with his family, to spend the winter months in South America. He will combine business for his firm with his outing.

Mr. Douglas A. Campbell, of the Maple Leaf Milling Company, Toronto, has sailed for England where, with his family, he will spend some months in the Southern Counties.

Mr. Joseph Quintal, of Messrs. Quintal & Lynch, grain exporters, and a director of the St. Lawrence Flour Mills, was a recent visitor to the Toronto Board of Trade.

Mr. H. P. D. Trickey, manager of the Short System Milling Department of Canadian Allis-Chalmers, Ltd., has returned to Toronto from a business trip through the Maritime Provinces.

Mr. Charles Ritz, eastern manager at Montreal for the Robin Hood Mills Co., Ltd., is a passenger on board the Canadian Pacific Steamer Empress of Britain, now cruising in the West Indies.

Mr. A. H. Rondeau, flour merchant, of Quebec, was introduced on 'Change in Montreal recently by Mr. J. A. Marshall, Montreal manager for the Western Canada Flour Mills Co., Ltd.

Mr. Angus D. MacDonald, St. John, N.B., has been appointed representative of the Copeland Flour Mills, Ltd., Midland, Ont., for New Brunswick and the Gaspe Coast.

Messrs. Kipp-Kelly, Ltd., machinery agents, Winnipeg, report a good general demand for power equipment and machinery repairs in western Canada. While there is very little business being done in the flour mill equipment department, all other lines are showing a satisfactory volume of sales. As the western Canada representative of Vickers, Ltd., Messrs. Kipp-Kelly, Ltd., are doing a flourishing business in the various products of the former concern, while in the way of milling work it is at present installing a plant at Steinbach, Man., for Messrs. Barkman & Sons, the daily capacity of which will be 125 barrels.

Mr. E. S. Parker, grain broker, Grain Exchange, Winnipeg, was introduced on 'Change in Montreal recently, by Mr. S. S. Pocock, Montreal manager for the N. Bawlf Grain Co., Ltd.

Messrs. H. Flowers & Sons, Halifax, N.S., have been appointed representatives for Nova Scotia and Prince Edward Island for the Copeland Flour Mills, Ltd., Midland, Ont.

THE PRACTICAL MILLER

DO YOU SHATTER OR GRIND WHEAT?

It is undoubtedly a physical phenomenon that the flours produced by a shattering action contain more starch and less gluten (or gluten material) than those made by gradual grinding. The theory that first middlings flours and sizings flours are deficient in gluten because they come from the interior of the berry is untenable. Even if it were true—which it is not—that the gluten proteins are resident in the portion of the endosperm adjacent to the bran, it would not explain the character of these flours; for the middlings removed from the bran-coat by the first, second and third breaks are often broken directly from the bran. Even in the first break many spots will be found on the inner side of the bran that are free from any clinging material. These particles largely go to make up the first middlings and the sizings, and if they were possessed of a high protein content, the flours from their further reduction might reasonably be expected to be strong. As a matter of fact they are weak; but it seems that the reason for the weakness is due to the comparatively sudden shattering of the larger middlings. If one were to run over a big piece of concrete with a heavy road-roller, it is likely that a great deal of dust would result, and that much of the rubble would fall out of the binding material, while if one used a small hammer and gentle blows, one could reduce the piece to chunks as large as apples without producing much fine stuff. Of course the binder of flour material is hard and tough and the dust that is made by the shattering action of the rolls is probably composed of starch, or rubble, instead of the binder. As one gets a little further down the line, say to the third or fourth middlings, more of a grinding action, and less shattering takes place, and the gluten material or binder, begins to be reduced to the point where it will pass through the flour cloths.

MILLERS AND RIPARIAN RIGHTS.

Ice had little commercial value in the days when the country was sparsely settled, and lawsuits respecting the ownership of ice on streams and mill ponds were for a long time rare as compared with suits involving other phases of riparian rights.

The right of the riparian owner to the ice on the mill pond and in the stream is now pretty generally conceded by the courts. There are exceptions in the case of navigable streams but the miller is rarely interested in navigable waters. The mill stream is generally one in which the riparian owner's title extends to the middle of the stream under the common law, and the ice belongs to him, as owner, not as miller.

The mill pond ice belongs to the miller if he has title to the bed of the pond by purchase or by prescriptive use through obtaining the right to flood the land. But the simple right to flood the land, where the riparian owner has retained title to the bed of the pond, does not confer the absolute right to the ice on the owner of the mill. The miller cannot assume the right to cut the ice anywhere on his pond regardless of riparian ownership. His interest in the ice, however, is such that he is entitled to have it remain on the pond, and he can prevent riparian owners from cutting it if its removal would decrease his power.

PHYSICAL CHARACTERISTICS OF WHEAT.

It is chiefly the physical character of the wheat that determines its behavior from the time it enters the mill until the flour is ready for the packer. It is true that certain physical characteristics are usually accompanied by a corresponding chemical composition, but not always; and, it is not the amount of protein contained in the wheat that determines whether it is hard or soft, but the physical condition of the protein. It is also the physical condition of the berry, and of the middlings made therefrom that largely determines the color of the floor from any particular stream, and, to a great extent, the amount and quality of the gluten, or gluten proteins, of that flour. If the flour cells are composed of a hard, horn-like matrix, in which the starch cells are imbedded, comparatively few bare starch grains will be dislodged by the action of the rolls. The flour will be sharp and granular, and it will be found difficult to reduce the middlings to the size required for flour without also breaking up bran particles, if there are any adherering to, or mixed with the middlings. If the wheat has been heavily tempered it is likely that the middlings will be inclined to flake, and the scalps will be found carrying a great deal of gluten material, amalgamated with the flattened impurities. If these glutinous flakes are broken the bran particles are likely to be broken, too; and the tailings flours, though rich in gluten, will carry a large quantity of finely divided fiber, which will seriously interfere with the coherency of their gluten.

All students of milling are familiar with the fact that the vitreous varieties of wheat are responsible for the present process of milling. Before the introduction of the purifier, and the roller mill, very good flour was made from soft wheat by the simple process of reducing the berry on stones. As there was nothing to offer any considerable resistance to the reducing action but the bran, it escaped any very severe treatment and could be kept comparatively intact. But with the same process the hard wheats could not be made to respond in the same way. If the pressure exerted was sufficient to reduce the endosperm to flour, the bran was also reduced, in a measure, and the resultant flour was contaminated with a lot of finely divided fiber. This gave it a poor color, and so lowered the quality of its gluten that it could not be made to produce a satisfactory loaf. When it finally occurred to the miller that the endosperm of this vitreous wheat could be removed in large particles without unduly abraiding the bran, and that the small bran particles that were made could be removed with the aid of flour, out of contact with the bran, the hard wheat flour immediately became the superior product.

THE PRACTICAL MILLER

Later, the soft wheat miller adopted the same process and found that his flour was improved also. He did not, however, make the marked improvement that accompanied the introduction of the process on hard wheat; and there is not today the difference between the poor milling and the good milling of soft wheat that there is between the poor milling and the good milling of hard. This is due wholly to the difference in the physical character of the two types of wheat.

A CRACKED CORN GRADER.

There are, doubtless, many millers who will be interested in the simple arrangement and efficient working of the idea described herewith for grading cracked corn or, if necessary, for separating sweepings into grain and dirt. Cracked corn, ground wheat or other grains fed into the hopper of the apparatus is speedily separated into from two to five grades, according to the blast pressure used and according to the rate at which the material is fed into the apparatus from the hopper.

As shown by the sketch a blower with a 6-inch delivery pipe is used, the connections therefrom being made with common black iron stove pipe and a long sweep elbow. A sliding gate placed between the blower and the feed hopper and another gate between the hopper and the blower pipe permits any desired rate of feed into a blast of air from zero to the full capacity of the blower.

The 6-inch pipe extends vertically a few inches into the lower end of a three-foot length of 8-inch pipe, an inclined spout is arranged to catch whatever material falls out of the air in the 6-inch vertical pipe. A similar length of 10-inch pipe is arranged together with its spout above the 8-inch pipe, and a piece of 12-inch pipe is placed in a like manner above the 10-inch pipe. A 14-inch elbow is placed above the 12-inch pipe and the elbow is piped into a cyclone dust collector.

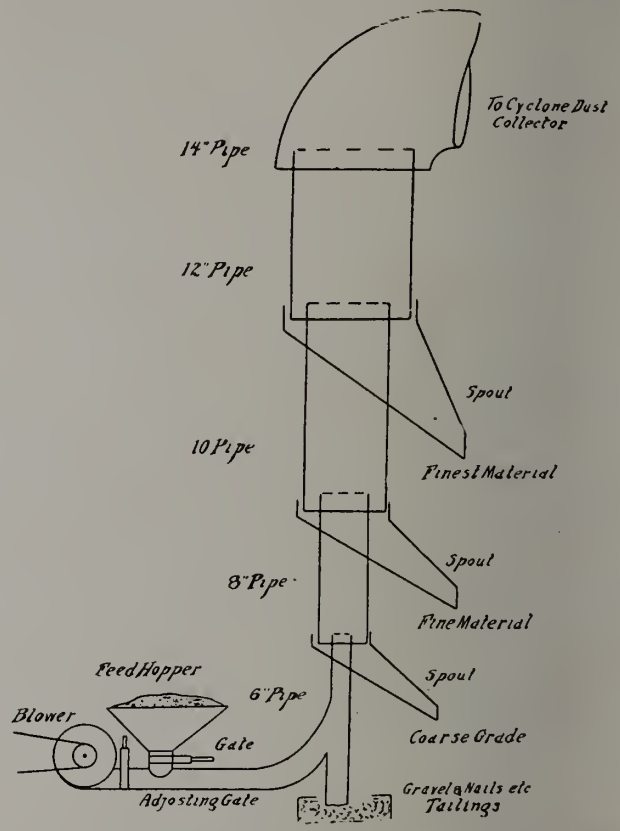
When material falls from the hopper into the blast of air from the blower, the material is carried up the long sweep elbow until the vertical portion of the pipe is reached. From thence the heavy tailings fall down through the lower vertical pipe which is so arranged that no air escapes through it, an injector-like action causing some air to be drawn in instead of any being driven out with the tailings.

The remaining material is then driven by the blast up into the 8-inch vertical pipe where, the area being increased, the velocity of the blast diminishes and is unable to carry up the larger or heavier particles. These particles fall down around the smaller pipe and are caught in the inclined spout and sent to a box or to a bin. Injector-action also prevents air from coming out through the spout.

The same action takes place at each of the larger pipes until only the very finest material is carried over through the dust collector. The diameters of the several vertical pipes may be varied according to the separations required.

It must be kept well in mind, however, that such a system works better with smaller pipes than with larger ones because were the first pipe 12 inches or more in diameter and served by a larger blower, the material in the middle of the 12-inch stream would not be able to find its way out of the blast as quickly as from a 6-inch column of air and material.

From the foregoing, it will be seen that the larger the units of this apparatus, the more the gradings will overlap each other, the more coarse material there would be in the finer grades and the more fine material caught with the coarser grades of stock. It would seem, therefore, that instead of being sent



upward in a round vertical pipe, the discharge opening should be made flat and wide so that however great its capacity, the stream of material should never be more than 3 or 4 inches in thickness. This would permit the heavier pieces of material to very readily find their way out of the high into the low-pressure blast and would make the grade separations more sharply divided.

SUSCEPTIBILITY OF WHEAT TO SMUT.

An Italian scientist recently made painstaking and exhaustive experiments with many samples comprising 13 varieties of Italian wheat to determine their behavior towards infection by smut and "bunt." As a result of his investigation he found that there were two factors which determined the relative susceptibility of different varieties of wheat to infection. These were the intrinsic resistance of the variety and the degree of germinating energy of the seed. The intrinsic resistance was found to be independent of the degree of germinating power. Wheats with a rather feeble germinating power may nevertheless be resistant to smut.

THE PRACTICAL MILLER

AN EARLY FLOUR DUST INVESTIGATOR.

It appears that nearly 40 years ago, in 1884, the public lighting inspector at Dresden, Germany, made a series of experiments to determine if flour dust explosions could be caused by electricity generated by friction. That functionary's investigations were quite thorough and his conclusions were that electricity developed by belting can and does cause ignition of flour dust. His explanation why, if such is the case, explosions are not more frequent, was quite plausible. It was due, he said, to the fact that in ordinary establishments both factories and flour mills, the quantity of metal is large and the metallic frames and machinery are so arranged that the electricity is safely conducted away. He suggested that where there was no such connection of machinery it be made so as to carry off the electricity. The name of this early investigator in dust explosion was Boher.

USEFUL IDEA FOR OILING BEARINGS WHICH ARE DIFFICULT OF ACCESS.

Occasionally there will be found in the mill a shaft or machine bearing which is, according to location, very hard to lubricate. Perhaps a necessary post, spout or other object passes just where the oil-can would like to be when delivering oil to that bearing. As a very natural consequence, too little lubricant finds its way into the bearing in question and far too much is spilled and runs down over the shaft, timber, machine or floor.

One of the best ways of overcoming the above lubrication difficulty is to drill and tap the bearing —usually its cap—for ¼-inch pipe which should be screwed into the bearing and then carried as directly as possible to a point where the oil-can may be used easily and without spilling oil. Sometimes a bit of bent or straight pipe will meet all requirements. Again it will be necessary to use elbows, nipples and perhaps other fittings to bring the end of the pipe to a good position for receiving oil.

A grease-cup may sometimes be made to answer better than squirt-can oiling. When such a device is used care must be taken that the entire length of the pipe is filled with grease or there may be a burned bearing before grease finds its way to the journal.

Such an oil-pipe should always be carefully closed. A screw cap will do the business, but proves unhandy and is a time-user which the oiler is sure to hate. The best cap is a bit of pipe—a nipple—which will slide easily over the ¼-inch pipe. Close one end of the nipple with a cap and the cover is ready. A pipe to be thus closed should stand nearly vertical.

When long oil-pipes are used, they should be cleaned out at least twice a year. The best way is to blow them out with compressed air of at least 100 pounds pressure. The next best way is to "blow-out" the pipes with dry steam. Air is far better than steam, for no matter how dry it may be, some of it will surely condense as soon as it strikes the metal of the pipe and a little moisture will surely be found in pipes which have been "blown out" with steam.

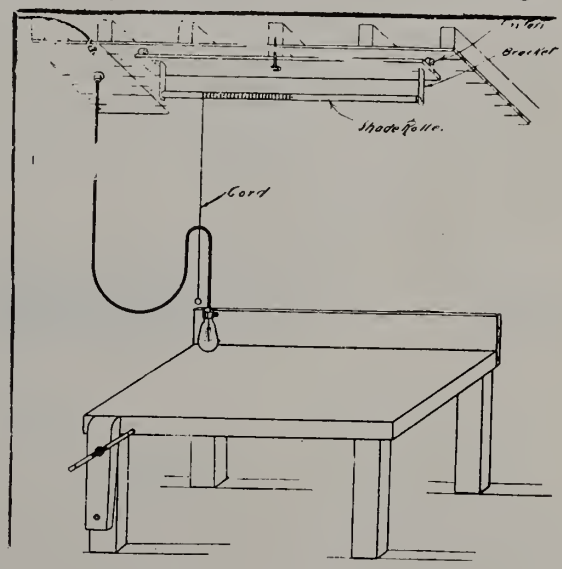
EFFICIENT LOCATING OF MACHINERY.

Before adding new or second-hand machinery to your plant study it out well and put the change on paper or have it firmly fixed in the mind before attempting to carry it out in order to have the machines placed so as to be able to get all around them. Mills having all kinds of floor space vacant, place machines in all manner of inconceivable places where it is impossible to get to them without tiring out an already much-tired miller.

Place a machine in line with other machines as nearly as possible. Never add a countershaft to drive it if it can be driven off a shaft already there and be very sure there is really need for the machine before adding it.

A HANDY ELECTRIC LIGHT HOLDER.

This device consists of an arrangement for the suspension of a lamp over a work bench. It consists of a long window shade roller mounted by means of ordinary window shade roller brackets to a board about 4 inches wide and 4 inches greater in length than the shade roller. Through the centre of this mounting board runs the pivoting screw into the ceiling. At either end of the board two castors are fastened bearing against the ceiling. This arrangement enables the mounting board to be swung in any desired direction about the lag screw.



A stout string or cord is next fastened to the shade roller at its middle and, by operating similar to a window shade cord, can be wound on the shade roller either side of the centre to any desired height. To this cord is attached the incandescent lamp. This device, as shown by the accompanying sketch, is very flexible and enables the light to be placed in any position at a moment's notice, and can also be easily moved to any other position for special repair work.

Judicious advertising is a potent force in sales, and the Canadian milling industry would undoubtedly benefit by more of it

THE PRACTICAL MILLER

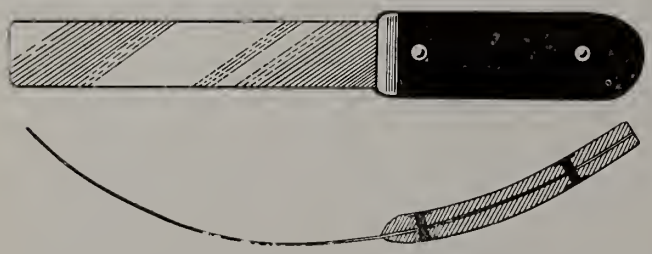
VARIATION OF FLOUR MOISTURE.

It is well known that moistures of flours differ greatly, not only at the time they are milled but after they have been milled for greater or less time. A variation in the moisture present will cause some variation in the different quantities tested for moisture but, unless flours become excessively dried out, this difference will not be great, and a determination of moisture for general purposes is hardly necessary. Flours which are sent from the mill in small packages have a tendency to dry out to a greater or less extent during transportation. Under such conditions a determination of moisture would not accurately express the amount of water in the flour which it had in bulk and would be misleading. For this reason, moisture determinations should not be made, other than for some special purpose, except when the sample is sent in a moisture-tight container.

All flours show a certain amount of acidity, depending generally upon the amount and kind of ash present. If the flour has become unsound this acid may be slightly increased and the amount of acidity may sometimes show the extent of certain kinds of unsoundness, but unsoundness generally becomes so apparent in other ways during the course of the analyses that the determination of the acidity does not add much to the information obtained.

A HANDY TOOL TO CLEAN FEEDERS.

Nearly every miller has daily occasion to clean out his roller feeders on rolls and feeders on purifiers, etc. Pieces of tin get bent out of shape and if left on the machine soon become lost. Something handy for the purpose, which can be carried in the pocket is here shown.



The contrivance consists of a piece of steel clock spring about 8 inches long and ¾ inch or ⅞ inch wide, which is riveted between two pieces of thin belting. The handle is 3½ inches long and 1¼ inch wide at the widest place. The whole thing need not be over ¼ inch thick.

MILLERS AND GRAIN MEN
all over the Dominion have testified to the worth of
"Canadian Milling & Grain Journal."
You, too, will find it of value and interest.
$3 for twelve months.
CANADIAN DOLLARS FOR A CANADIAN PAPER.

THE BAKING STRENGH OF FLOUR AND HOW IT IS ASCERTAINED.

The strength, or baking strength, of flour may be defined as its ability to take up and retain water and to produce a large loaf of very fine texture and with a dome-shaped upper crust.

Many years of experience have confirmed the fact that a definite scale of figures must be used to express the baking strength of flours, and that the position of any flour on this scale must be determined after considering its conduct in as many different ways as possible. The use of a fixed, numerical scale is especially important because standard flours cannot be satisfactorily employed for purposes of comparison since they themselves vary in strength with age. As it is often desired to compare the flours of one season with those of previous years, a shifting and variable standard is out of the question. The great difficulty, however, is to decide just what sort of a scale to establish and what importance to attach to each different observation in order to determine the place on that scale of any sample of flour which has been baked.

The method adopted by the Dominion Cerealist at Ottawa is, according to a recent report by himself on the subject, rather empirical; but, he says, it is fairly satisfactory, and so far as he is aware it is the only method yet put forward by which definite, numerical expression of baking strength can be made, after taking into consideration all the factors here named; water absorbed, water retained, volume of loaf, shape of loaf, crust form, and texture.

Finding Baking Strength Figures

The following is the way in which the figure for baking strength is determined. The figures for water retained, for volume and for form of crust are taken as they are; those for water absorbed and for texture are multiplied by three; and the figure for shape of loaf is multiplied by 500. The total of all these figures is then ascertained and this is divided by 10. An arbitrary number, 46, is then subtracted from this total. The object of these last two operations is merely to bring the figures for baking strength down to such dimensions that, when dealing with ordinary flours, they will usually lie between 80 and 100. Exceptionally strong samples of flour may pass the 100 mark and very weak samples may fall considerably below 80. Roughly speaking, it is said that flours having a baking strength of 70 to 80 are weak, those from 80 to 90 are of medium strength, and those from 90 to 100 are strong.

While, owing to their relative scarcity, the strongest flours usually command the highest price, it must not be concluded that they are in any absolute sense superior to the weaker kinds. Excessively light bread can only be made from the strongest flours, but excellent (perhaps better) bread can be produced from somewhat weaker flour; while for pastry it is more desirable to employ flour of a decidedly weak and starchy character. Very strong flours make good pastry only when excessive amounts of fat are used. Weak flours require less fat.

THE PRACTICAL MILLER

HEAT AN EXCELLENT METHOD OF RIDDING MILLS OF PESTS.

After chemical fumigation, methods of which have from time to time been dealt with in "Canadian Milling & Grain Journal," the most practical and effective method known to control all classes of mill-infesting insects is in the application of high temperatures and this method has been so developed, that it is recognized not only throughout this country but also in several foreign countries, as the most effective, practical and inexpensive of all treatments, and has the added advantage of being absolutely safe. A temperature of from 118 degrees F. to 125 degrees F. in all parts of the mill is sufficient to kill all stages of every mill-infesting insect, and a mill with sufficient radiation to heat it during winter to 70 degrees F. without the heat of the running machinery can be heated readily in summer to a temperature of from 118 degrees F. to 125 degrees F.

Steam heat is the most satisfactory heat for raising mill temperatures to the killing point. One square foot of radiation is usually sufficient to heat from 50 to 100 cubic feet of space. In a five-story building one square foot of radiation to each 50, 60, 75, 90, 110 cubic feet of space for the first, second, third, fourth, and fifth floors, respectively, is suggested. If steam pipe is used for radiation, the 1¼ or 1½ inch is recommended as most practical. The steam pipes should be located near the floor and arranged to give equal distribution of heat. There should be water traps to draw off all accumulations of water in the pipes. To take advantage of the heat in the machinery, begin heating the mill immediately after shutdown. The steam should be turned on with from 25 to 50 pounds pressure. Thermometers should be placed at different points on each floor, that the temperatures may be readily ascertained. Time must be taken to reach the desired temperatures and the temperatures should be maintained for several hours to allow the heat to penetrate all infested parts. By beginning the heat process directly after shutdown Saturday evening and continuing until Sunday night, there will be no loss in running hours. Do not attempt to heat on a windy, cold or rainy day.

Heating mills as recommended for the control of mill pests will not injure any of the mill structure or equipment, and it is recommended by several of the largest mill insurance companies as the safest method.

While carbon bisulphide fumigation is effective and is strongly recommended for all insect infestations in the farmers' bins, it is not an effective fumigation in flour mills; and since there is such an element of danger from fire in its use in these mills and in large grain elevators, it is not recommended for this purpose. It is, as a very general rule, prohibited by mill and grain-elevator insurance companies, the use of it voiding policies.

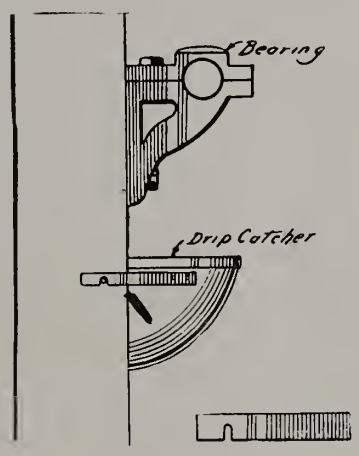
Liverpool.—British millers have contracted to sell to Russia 12,500 bbls. of flour monthly for the next twelve months, payment for which is to be in gold.

SLICKS SHOULD BE OF THE BEST.

It is superfluous to say that every miller should be the possessor of as fine a flour slick or spatula as it is possible to obtain; for there is continual use for it in making the rounds of a mill and sampling the products. The slick made of spring steel 2½ inches wide by 6½ inches long, including the 3-inch handle, makes an ideal one for every day use for the pocket. The slick for the sample table is 3 inches wide by 7 inches long and made of steel or nickeled on soft white metal. Ivory or aluminum are not worth a cent for a slick, as they are too easily affected by the weather, heat and moisture. It is well not to use the slick for anything but what it was made for, and it should be kept as smooth as possible at the edges and should be rounded at the corners for pocket use.

ONE WAY TO PREVENT OIL DRIPPING.

Dripping oil from bearings is worse than a nuisance—it is unsanitary and is an ever-present invitation for a fire. At several points in a western mill there have been installed oil drip catchers after the manner shown in the diagram. To carry out the idea a strip of galvanized iron is riveted on each side of an old elevator cup and a notch cut in each strip



as shown in detail below. If a cup cannot be obtained the same width as post, the galvanized iron strip can be bent in such a way as to fit on each side of post. A nail or screw is driven in each side of post to hold the notched strip. When the cup is full it is easily removed without spilling the oil, by sliding the cup upwards off the nails or screws.

RELIEVING A ROLL CHOKE.

In relieving a roll choke it is sometimes necessary to hunt for some one to go below and keep the stock from running into the elevator, and also keep the spout clear as the one above starts it from the roll hopper. If a piece of tin, the same as that used for spout lining, is kept handy, one man may relieve a roll choke alone by slipping this section of spout lining in the opening at the lid. Then he can, with a stick, start the stock down from the roll above, without danger of overloading and choking the elevator to which the spout leads.

THE PRACTICAL MILLER

CANADIAN FLOUR IN SOUTH AFRICA.

Cape Town.—About the only advantage Australian flour holds over Canadian flour is one of price, and one has yet to hear any criticism as to the quality of Canadian flour. Some idea of the value placed on Canadian flour by the South African millers is shown by the following extract taken from a circular letter sent out by one of the biggest millers in the Union: "All our products are milled from the best wheats obtainable, the only addition being a certain percentage of Canadian flour, which is manufactured from the finest Canadian wheat and is of excellent quality. The resultant blend of our own products with this Canadian flour is most satisfactory in every way."

In this connection it may be well to state that, when investigations were first made in 1913, there were quite a number of South African millers criticizing the extra price demanded by Canadian shippers for Canadian wheat, as compared with the prices offered for supposedly the same grades from United States ports. Having had in another field some experience as to Canadian grades from American ports, it was possible, in a few months, by securing Canadian Government grade samples, to convince the users that the Canadian standard grades of wheat from a Canadian dealer, shipped through a Canadian port, were worth a great deal more to them in value than the difference asked in price.

It is difficult to say exactly, but it is safe to state that half of the imported Australian flour is used by bakers. Up to last year fully 90 per cent. of Canadian flour was used by the cake or bread manufacturers as a blender with either South African or Australian flour. In the future, the use of Canadian flour by the householder should increase.

Although there are considerable stocks in hand of last year's flour, which was brought in duty free, there is a constant demand by the trade for information as to when Canadian quotations may be expected within a reasonable distance of Australian prices and terms.

A RELIABLE BELT SPLICING CEMENT.

An extra good belt splicing cement is made by taking equal parts of isinglass and good glue, and adding enough water to cover. Let this soak for 10 hours and add pure tannin until the mixture becomes like the white of eggs. To use, rough up the surface of the leather to be united and apply the cement hot, clamping together by using two furniture clamps and two suitable wood blocks. Give it over night to dry and you will have a joint as strong as the leather itself.

There are several departments in this issue of "Canadian Milling & Grain Journal" which are specially interesting. After you have read them through, consider carefully whether you are not better off with the twenty-four numbers of the Journal on your desk, than with the $3 required for a full year's subscription, new or renewed, in your pocket.

The Duster

A group of visitors were going through an Ontario county jail, and a burly negro trusty was called to open the doors for them.

"How do you like it here?" one of the women asked.

"Like it, ma'am? If evah Ah gets out Ah'll go so far from here it'll take nine dollars to sen' me a postal card."

An American senator wants his country to secure a slice of the Province of Quebec. We have suspected for a long time that the people down there were jealous of OUR liberties. Now, we're sure o' it.

TO-DAY'S BEST STORY.

A charming young lady has been advised to undergo an operation for appendicitis.

"Will the scar show?" she asked the doctor.

"No . . . Unless you go into musical comedy," the medico replied.

An Irishman whose wife was fond of moving from one house to another was met by a friend while walking behind a van load of household goods.

"Halloa, Mike, moving again? Where might you be going now?" the friend asked.

"I don't know," answered Mike, "I'm following the furniture to find out."

"Now, children," said the Sunday school teacher, "I have told you the story of Jonah and the whale. Willie, you may tell me what this story teaches." "Yes'm," said Willie, the bright-eyed son of a miller; "it teaches that you can't keep a good man down."

Rufus Redd Dogg

"Sum folks," remarked Rufus Redd Dogg," are as consarned dissatisfied after they gets sumthin' thet they wants, than they were 'afore they got it. F'r instance, Bud Harvey wanted f'r years t' capture a wild cat. Wan day off he went t' th' woods with Dinky Loftis an' they warn't there but a few minites afore Bud whos' skinny, saw a cat up in a tree. Sez him t' Dinky, "you're too fat t' shin up after et. You kin stan' below an' catch it when I knocks it down." "A'right," says Dinky an' up goes Bud. In a minit there wuz a h--l av a commotion up in th' tree. Squalin' and screechin' and fightin'. Sounded like a lodge o' grain growlers protestin' again th' evaporation o' th' Wheat Board. Dinky lissens a while then he hollers t' Bud, "D'ye wan' me t' cum up an' help ye hould him Bud? "Hould him," yells Bud from th' top ov th' tree, "hould him is it? Say, fer th' luv o' Mike cum up an' help me let go av him."

THE PRACTICAL MILLER

WANTED.—Position as loading foreman by young man, twenty-eight years of age. Has had a number of years of general milling experience in mills of various capacities. Keenly interested in milling work and prepared to give best service. Reply Box 63, "Canadian Milling & Grain Journal," Dubrule Building, Montreal.

FLOUR SALESMAN wanted, to represent Ontario flour mill in Montreal. Must have experience and be able to furnish best of references and a bond. Must speak both languages. Reply, giving full particulars, Box F25, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FLOUR SALESMAN seeks position. Has splendid connection in Montreal and Quebec. Speaks French and English fluently. Prefers mill handling Manitoba wheat. Knows business thoroughly. Good credit man. Reply Box 90, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FLOUR SALESMAN, speaking English, French and Spanish, seeks connection with milling concern. Reply Box 106, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED TO EXCHANGE—A 20-inch McLachlan Chopper for a 15-inch Moore or Vessot, after April, or will buy. Reply F. H. Robinson, merchant miller, Cookstown, Ont.

MANAGER WANTED—Modern flour mill in Ontario requires the services of a first class manager. Close knowledge of flour market a prime essential. One with record as a business getter will receive preferred consideration. State age and salary expected. Reply Box 87, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

STENOGRAPHER—A large flour milling company requires the services of an experienced stenographer, one with previous experience in the trade preferred. Reply Box F 21, "Canadian Milling & Grain Journal", Dubrule Building, Montreal, P.Q.

FLOUR SALESMAN open for immediate engagement in the Maritime Provinces. Experienced. Reply Box 104, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED—Best price on second-hand Midget Marvel Mill, also, terms, if any. Reply Box 93, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—First class mill, 130 to 140 barrel capacity. Good water power, equipped with modern machinery and doing a big local and shipping trade which goes with the business. Attractive terms will be given. Reply Box 94, Canadian Milling & Grain Journal, Dubrule Building, Montreal, P.Q.

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CANADIAN GRAIN, FLOUR AND FEED
BROKERS AND COMMISSION DEALERS

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THE PRACTICAL MILLER

CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

FLOUR SALESMEN—A large milling concern requires the services of experienced flour salesmen. Applicants must state experience and give credentials. Reply Box F 20, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED.—Grain Scourer, capacity two to four hundred bushels per hour. State H.P. required to operate. Machine must be in good working order. Reply Box 105, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED — By Head Miller, with 20 years practical experience in modern Canadian mills up to 4,000 barrels capacity. Can guarantee best results as to quality and yield on both hard and soft wheat, and maintain mill at highest point of efficiency. At present in charge of a 1,000 barrel plant. Reply Box 85, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

PRACTICAL MILLER with 23 years experience seeks position with plant having daily capacity of 250 barrels or upwards. Can furnish excellent references. Reply Box 82, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—A 50-barrel Midget Marvel Mill, also complete installation of a flour milling plant. In use about three months. Machinery must be moved from actual premises. Good price for cash. Reply Box 103, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Head miller, with twenty years experience in 150 and 275 barrel mills, and still employed, is desirious of making a change. Applicant is 36 years of age, married, and can furnish excellent references. Reply Box 84, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

SALESMAN WANTED for the Province of Quebec. State requirements, experience and salary wanted. Reply Box 102, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

WHEAT TESTER WANTED.—Must be in first class condition, and reasonable in price. Reply Mr. Charles Wyild, Ripley, Ont.

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GRAIN AND FLOUR IMPORTERS

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:: FLOUR ::
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70 Wellington Street - GLASGOW
CABLE ADDRESS "CALYPSO"

"THE FIRST REAL ADVANCE IN THE GRAIN CLEANING INDUSTRY IN THE PAST 35 YEARS"

THAT'S what one man said about the Carter Disc principle of separation. He knows from experience that the

—makes a cleaner separation, in one operation, than has ever been possible heretofore;—saves the loss of wheat in tailings;—increases test weight of wheat by the scouring action of the disc;—requires little or no attention; and has practically no upkeep cost.

Made for Three Classes of Separation

The A type machine separates oats and barley from wheat, including durum, wheat from screenings, oats and barley from rye, seeds and wheat from oats.

The Seed Type machine removes wild peas, cockle and seed from wheat.

Small Combination Type removes oats, barley, cockle, wild peas, weed stems, and seeds all in one operation.

This is our Guarantee

"We agree to accept the return of the Carter Disc Separator and give you full credit for it, if after a reasonable trial it is not satisfactory in all respects."

There are no strings to that offer. It's entirely up to you to decide the efficiency and money-saving possibilities of the Carter.

The Strong-Scott Mfg. Co.
Limited

"Everything for Every Mill and Elevator"

WINNIPEG - - - - MANITOBA

CANADIAN ALLIS-CHALMERS LIMITED - - STRATFORD, ONT.

Eastern Representatives

CONCRETE

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CANADIAN
Milling & Grain
JOURNAL

VOL. III MONTREAL, MARCH 15th, 1922 No. 4

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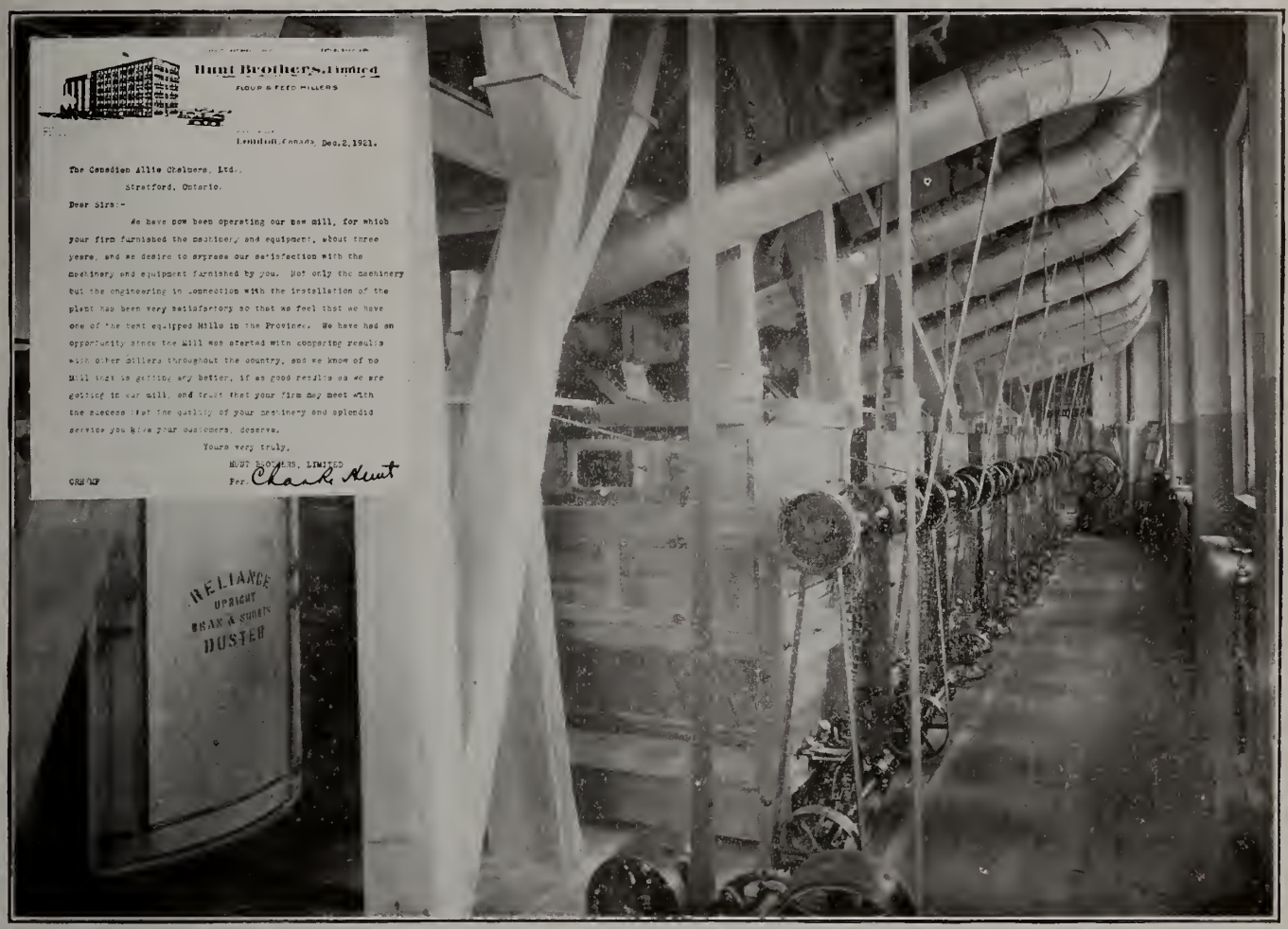
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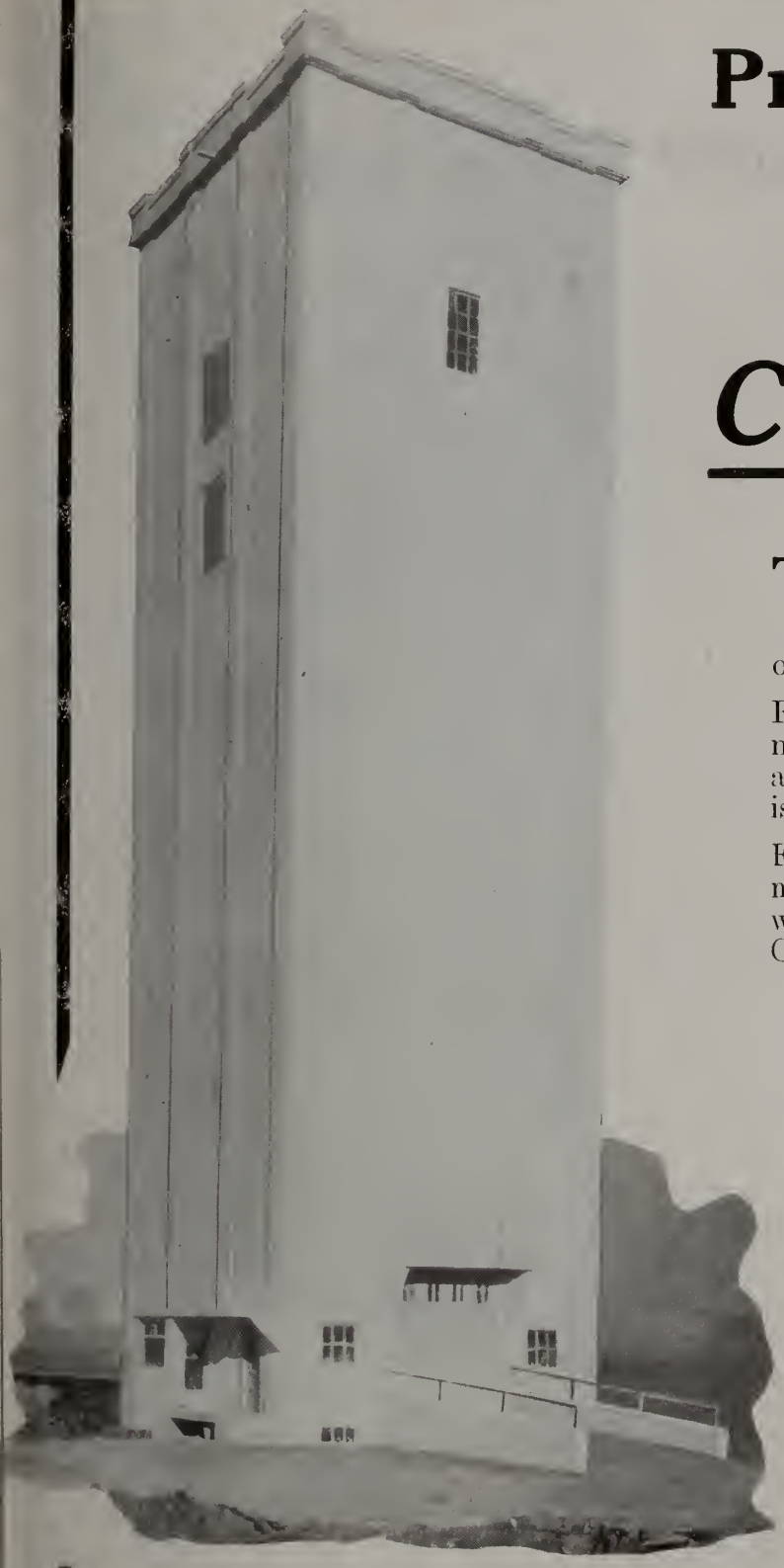

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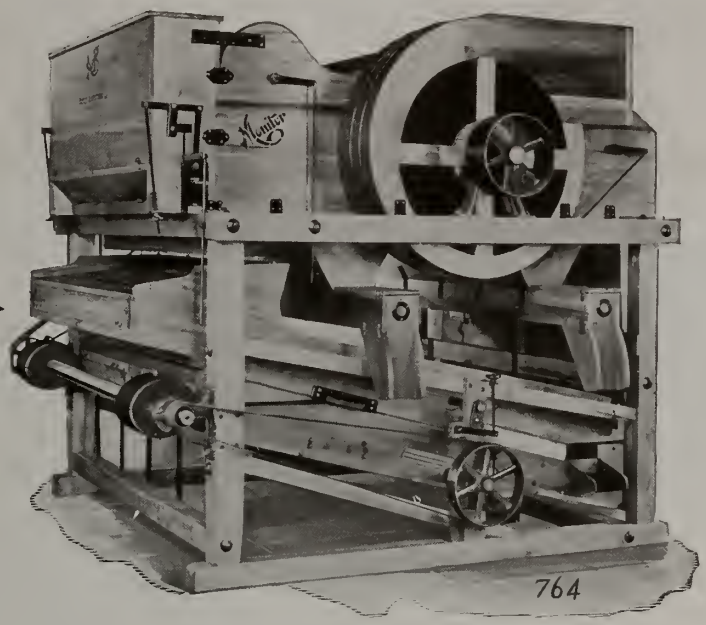

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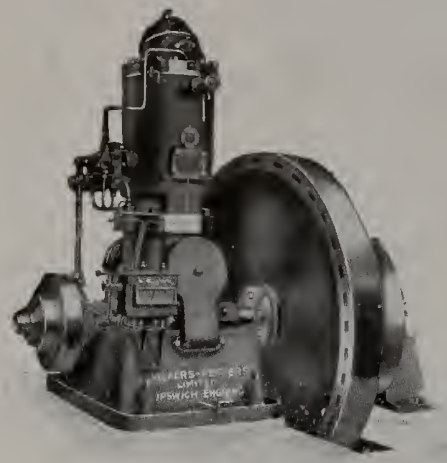

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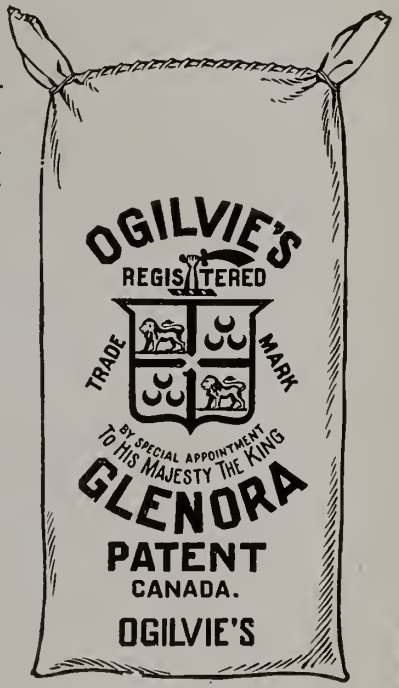

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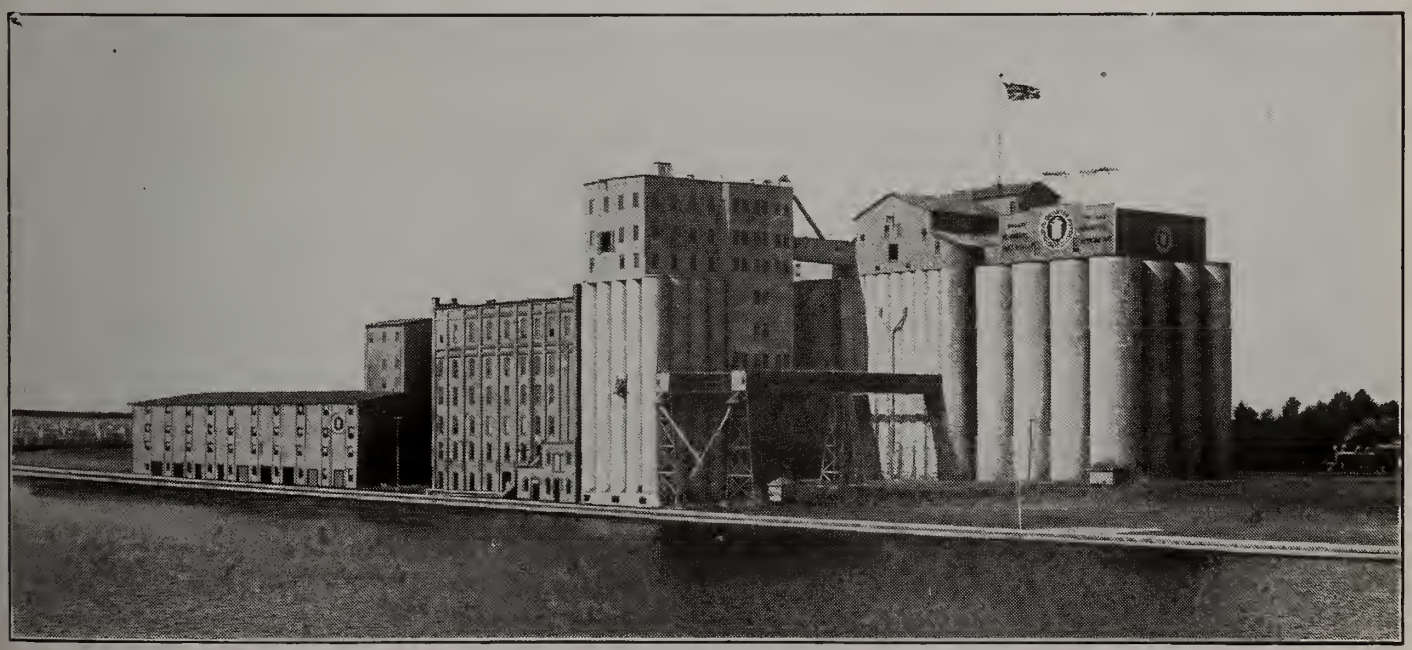

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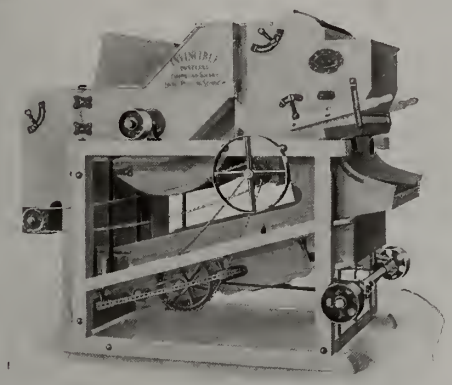

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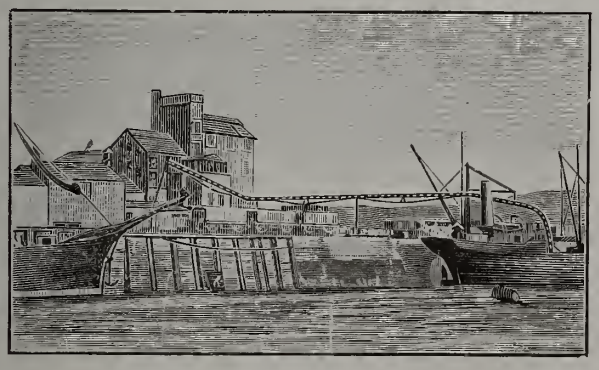

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VOL. III MONTREAL, MARCH 15TH, 1922. No. 4

CANADA'S ONLY MILLING AND GRAIN PAPER

Litigation Under the Law of Contracts.

ACCORDING to a leading Canadian jurist seventy-five per cent. of the litigation involving the law of contracts rises out of the four vital elements: Quality, Quantity, Terms and Delivery, and it would be well for millers and grain handlers to remember that to avoid loss and trouble they should recognize that the law demands certain specific acts and forms to make a contract legally enforceable.

A contract for the purchase or sale of goods, wares or merchandise over the value of $40 to be legal must be made in writing or evidenced by part payment or by part performance.

Three essentials are necessary to any contract —an offer, an acceptance, and a consideration.

The offer must be communicated.

The acceptance must be delivered before the offer is withdrawn; it must be absolutely unqualified and identical with the terms of the offer.

Furthermore, the consideration must have real value.

The remedy for a breach of contract properly entered into is to go immediately into the open market and buy or sell the material in dispute. The "duration" of an offer is often a matter of doubt in the consideration of contracts. Legally, a "reasonable," time is allowed, but in the event of such an offer having been for acceptance within a stated time—say, thirty or sixty days as is very frequently done, it will no doubt be of interest to many millers and grain men to learn that an offer so made can be withdrawn at any time, provided that such revocation reaches the other party before the acceptance is legally made.

Making a Success of the Small Mill.

MUCH is being said at this time about the chances of the small mill to hold its own against the competition of the big mills. Some say it can't be done. Others are sure that the small mill can withstand all the competition the big mill can give. That many small mills have taken the count cannot be denied. That many others are prosperous is certain. If some fail while others succeed, why not look for the cause of the failure and the cause of success? Location must always be considered. It is safe to say that if a mill is so located that it can get all the good grain it needs at the door to keep it going, and there is a population near enough to the mill to take the mill's output, or at least most of it, so that expensive shipping need not be indulged in, that mill should be able to hold its own. Those who have seen many small mill failures are firmly convinced that the trouble was due entirely to poor management, and it is likely that this is more often the case than any other one trouble.

Many instructive and authoritative articles and ideas which cannot but be of value to small millers will be found in The Practical Miller's department of each issue of Canadian Milling & Grain Journal.

Providence and the Wheat Crop.

STATISTICIANS and the wheat growing interests may believe that they make the wheat crop between them, but this is not true; the earth produces the wheat, and as season follows season, and year follows year, the earth accepts the responsibility for giving mankind its daily bread. In so doing it unquestionably needs man's co-operation, but this it has its own ways of securing, and it does not fail. If any group or body of men thinks it can counteract this great natural law, it has but to observe how slight was the effect even of the most terrible of wars on the world's production of wheat to realize that a force transcending that of human effort is always at work to fulfil the needs of the world.

What Every Miller's Aim Should Be.

THAT millers have a duty to perform to the community in producing the best flour possible goes without saying. No mere man should insinuate that he is in business merely to make a living, and the best and most successful men have been those who have, by achieving success in business, lifted the products of the particular business to a higher plane than that upon which they found it.

Chemical or other tinkering with flour, therefore, cannot be tolerated unless it leads somewhere; and the larger, nobler question of improving the food of the community should be the ideal of every man. Let it be remembered, too, that it is a paying game to produce the best, and that the improvement of flour and consequently the improvement of bread need not be taken as meaning the improvement of color and strength.

Future Trading and Price Stability.

AT the moment when it first became necessary to provide more food than was required for the day's consumption, future trading was born. Since civilized man must know upon what he can depend in the matter of the necessities of life, contracts to

provide and to deliver these necessities form the very life blood of modern business.

With this fact established, a consecutive fact follows: namely, that any effort to arbitrarily fix prices or handle the distribution of products by a system of control which takes no account of the law of supply and demand, must end in failure. However accurate the estimate may be of future supplies, there will always exist a margin between the estimate and the reality, sufficient to cause fluctuation in prices.

There come times and circumstances when one man or a set of men must have a certain commodity and that commodity will rise in price, in proportion to urgency of the need and its distribution among those that have it to sell. Likewise, there frequently comes a time when over-estimates and a host of subsequent conditions cause a surplus on the market in the matter of contracts thus enabling the ultimate purchaser to take advantage of the over-supply to pay practically his own price.

It has been proposed to control the future price of wheat by withholding it until it is needed and giving it out on the parcel plan. Such schemes sound well enough on paper. Next to patriotism and love of home, they furnish a certain type of misguided orator with an inexhaustible fund of the raw materials of popular eloquence; but they are utterly incapable of realization for the reason that no man will attempt to provide for the future unless he is reasonably certain of his supply and a free market in which to bid for that supply.

Foodstuffs differ essentially from manufactured articles intended for restricted use. The manufacturer of safety razors and stoves, for example, is putting out a product limited in use. He himself is the maker, hence the only sales necessary are to the wholesaler or distributor and by such agent to the final purchaser. Furthermore, such a manufacturer can regulate his output by statistics quite as accurate as the life insurance table of mortality, but this cannot be done in the case of wheat, or indeed any other essential foodstuff, and the sooner this is realized by those who would change the existing wheat marketing system the better it will be for business and the country generally.

Being Busy vs. Making Progress.

THERE is a vast difference between being busy and making progress. When we see that clearly, we have gained an important bit of wisdom.

The easiest thing some people do, is to keep busy.

You have seen the person who is always busy—doing trivial things.

Opportunity comes to him as to all others; but he is so occupied with sharpening his lead pencils, or attending to other ordinary duties, that he has no time to listen. The routine of his work swallows him up, and he forgets what he is busy for. His favorite idea, and his response to all requests is, "I haven't time."

The man who makes progress is of a different stripe. He does not dawdle over or think of his job as something to fill up his time; but as something to accomplish. He has a goal; and he is always thinking, planning and seeking the quickest way.

When a proposal is put to him by his co-workers, who wish to guide and help him, how easy it is to reply, "I haven't time." But that is not the pathway to progress.

He should rather say to himself, "Let's assume that here is opportunity. I must consider carefully what it has to offer. Maybe I'll have to readjust my time; perhaps I'll have to change my methods. But I am ready for anything that will help the business." Whoever reasons and acts thus, cannot go far astray in the realization of his ambition.

Always Something to Howl About.

HAVING apparently grown weary of talking of "pools," "co-operative systems," and other freak methods of marketing, grain growers in Saskatchewan are now agitating through the various organizations with which they are connected for a change in the name of Manitoba wheat. The inference is not that the Saskatchewan grain growers are getting too little advertising in the markets of the world so much as the fact that Manitoba is getting more than its share.

This is indeed sad.

With a view, however, to constructively assisting towards the creation of that peace of mind so necessary in these dollar-thirty times for grain growers of whatever province, "Canadian Milling & Grain Journal" suggests that commencing with the present year's crop it shall be the duty of every Saskatchewan grain grower to see that not a grain of wheat leaves his fields without having legibly printed or stamped thereon the name of their province which has done and is doing so much to make the quality of Canadian wheat a household word the world over.

Contemplation of the potential circulation of such advertising as this would be leaves us positively breathless.

The Production and Consumption of Wealth.

THE production of wealth must always exceed the amount of wealth consumed. If, in the production of 100 units of wealth, more than 100 units of wealth are consumed, the position immediately becomes serious. Current is being taken out of the accumulator faster than it is being recharged. The wealth of a country or community is not built up on the principle of the widow's cruse. Neither can wealth be produced by Act of Parliament, Federal or Provincial, or by a municipal by-law.

The amount of wealth we consume to satisfy our needs depends on our standard of living. The more luxuries we enjoy over and above our normal requirements, the higher will be what we call the standard of living. The natural trend, and the conscious aim, of western civilization, is to improve the conditions under which its members live. Better food, superior clothes, more comfortable houses, and more entertainment. Municipally, better collective services as trams, water supply, sanitation, lighting, etc. Nationally — postal services, armies, air services, railways, judiciary, etc.

All these services, while not strictly speaking luxuries, mean that the members of the community enjoying them must produce the wealth to maintain them. The inhabitants of Canada must be greater wealth producers, per head of population, than, say, the inhabitants of the backward Balkan States, where the standard of living is lower than our own. The inhabitants of Canada must produce more wealth per head of population than the inhabitants of any other country in the world.

EASTERN PROVINCES
MONTREAL
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Phillips Square
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MONTREAL MARCH 15TH, 1922

THE MONTREAL MARKETS.

Flour.—The flour market has been featureless of late, business in all directions being quiet. Prices are unchanged. Millers are all operating to capacity in order to fill old contracts for domestic and export account, and the general impression is that there will not be much activity in the market until these orders are worked off. Car lots of spring wheat first patents are being quoted at $8.50, second patents at $8, and strong bakers at $7.80 per barrel in jute bags, ex-track, less 10c per barrel for spot cash.

The trade in winter wheat flour has been quiet, but the undertone of the market for these grades has been on the whole firm on account of the continued light offerings from Ontario millers for prompt and future delivery. On spot car lots of choice grades are quoted at $6.75 to $7 per barrel in second-hand jute bags, ex-track; broken lots at $7 to $7.25 per barrel ex-store, and winter wheat patents at $7.75 to $8 per barrel ex-store in new cotton bags. White corn flour is steady at $5 to $5.10 per barrel in jute bags, delivered.

Grain.—The foreign demand for all grain has been very limited, the bids received being unworkable by exporters. New York wired recently that there was no demand from over the cable for Manitoba wheat in that market, but that a fair business was being done in corn.

Recent cables from Liverpool report that the market for parcels of wheat has been easy on the heavy clearances from North America, and the continued pressure by re-sellers of Plate wheat, which depressed prices for Manitoba and Australian wheat 6d per quarter. Argentine freights have been lowered 10s per ton, which means about 5c per bushel.

Millfeed.—There has been practically no change in the condition of the market for millfeed. The demand continues good, prices being maintained, with sales of car lots of Manitoba bran at $32.50, and shorts at $33 per ton, including bags, ex-track, and broken lots of bran in mixed car orders sold at $28.25, shorts at $30.25, with middlings at $32.25 per ton, including bags, less 25c per ton for spot cash. Pure barley meal is being quoted at $38 to $40, pure grain moullie at $38, and feed cornmeal at $35 per ton, including bags, delivered. The market for rolled oats has been slightly weaker, and prices dropped recently 10c to 20c per bag, with sales of small lots of standard grades at $3 per bag of 90 lbs.

Baled Hay.—A fair amount of business continues to be done in baled hay, and the tone of the market is firm owing to the falling off in the receipts on account of the breaking up of the country roads, which has prevented farmers from making deliveries to shipping points. On spot sales of car lots of good No. 2 timothy are being made at $28 to $29, No. 3 timothy at $26 to $27, and clover and clover mixed hay at $24 to $25 per ton, ex-track.

CANADIAN FLOUR FOR ENGLISH BREAD.

There is a divergence of opinion throughout the United Kingdom regarding the respective merits of British and Irish milled flour and its foreign competitor, whatever the country of origin. The only serious competition which millers in Great Britain have to fear is that relating to the spring wheat qualities which find favor with many discerning bakers. When the winter wheat flours are considered, it is at once apparent that the average inland miller can produce flour equal to the best "soft" flours ever introduced into Britain or Ireland.

"The larger bulk of the produce in flour from our merchant mills," says "Milling," Liverpool, "is consumed by the commercial baker, and when the mechanical bakery is to be encountered, then the strength element of the flour is the leading characteristic of the flour that finds favor in such establishments. True, the color element is not lost sight of, but as this feature can be procured in another direction, the watchword of the yeast bread trade is volume, and this commands the price and sets the pace."

"The vagaries of the baking trade in regard to systems of baking batch bread make it necessary for the miller to supply qualities of flour of varying degrees of 'strength.' While in most districts a type of flour having medium 'strength' characteristics will be quite acceptable to the bakers in the area and will thus serve the general purpose of supply, yet in that area there doubtless will be a good insistent demand for a better "strength" presence in the sack, and this element is one which a certain class of miller has set himself and his mill out to supply.

"It is in such a circumstance that **the foreign imported article finds a ready market, and this applies to the leading brands of Canadian Spring wheat flours. There is nothing in the way of flour of similar standard quality reaching this country with such high capacity for making big bread or yielding the same return to the baker, compared with the flours described and emanating from Canadian mills.** To compete successfully with the Canadian Spring wheat flours, millers in the United Kingdom must adjust their milling practice, so that their product shall have the same all-round characteristics as the imported article, and this is specially applicable to the element which provides the flow with the capacity of enable the baker to produce a large volumed, well-piled loaf, and yielding the maximum number of loaves per sack. The lessons of control milling have been appreciated by many millers, and it is admitted that the straight grade flour fills the bill in regard to giving the maximum yield of bread, which is the desire of the baker."

San Francisco.—Completion of a plan whereby it is expected a third of the grain crop of California will be sold by the growers in British and other foreign markets without the intervention of middlemen in this country, has been announced by the California Farm Bureau.

The value of the grain to be marketed is estimated at $9,000,000, and its amount at nearly 300,000 tons, a contract was signed recently whereby George Mills & Sons, Ltd., of London, will handle all the grain that is shipped out by the exchange for export.

DISTRIBUTION OF THE 1920-21 CROP.

Ottawa.—The Dominion Bureau of Statistics has prepared a summary of the main movements of the Canadian wheat crop of 1921 from the fields of the West and East into the principal channels of consumption within the country and towards the export markets. For purpose of the grain trade, Canada has been divided into two main inspection divisions, the Western and the Eastern, the dividing line falling East of Port Arthur.

The chief source of supply is, of course, the crop of the year, computed at 263,189,300 bushels, of which 235,059,827 bushels were produced in the Western Division. Stocks on hand at the beginning of the crop year, September 1, 1920, amounted to 4,580,228 bushels and imports to 269,892 bushels. This makes the total flow into the Western pool for the crop year 239,909,947 bushels.

The quantity of wheat disposed of for commercial purposes in the Western division, that is, shipped out of the division or milled within the division amounted to 188,304,783 bushels. Shipments out of the division amounted to 163,964,892 bushels, distributed as follows: Exports to the United States, 46,272,438 bushels; exports to the United Kingdom and other countries, 37,717,742 bushels; shipments to the Eastern Inspection Division, 79,974,712 bushels. The quantity milled for consumption in Canada amounted to 21,404,712 bushels and 2,935,-179 bushels were milled but exported in the form of flour.

In addition to the above amounts disposed of commercially, it is estimated that 38,900,860 bushels were retained for seed, and 5,257,073 bushels were carried over in store to the next crop year (August 31, 1921).

SOUTH AFRICAN FLOUR IMPORT DUTIES.

The duty on flour entering the South African market, when imported from Canada, or any of the reciprocating British Dominions, is 2s. 3d (0.50) per 100 pounds, and 2s. 6d. (0.56) from other countries.

The great bulk of the import is in bags of 98 and 196 pounds net weight. The outside bag is usually a good hessian, sometimes a strong twill sacking, and most importers insist on a white cotton bag lining.

AMERICAN WHEAT GROWERS' EXCHANGE PROPOSE NEW SYSTEM OF MARKETING.

Kansas City.—An American Wheat Growers' Exchange representing ten states which have already taken steps to establish an orderly marketing programme for grain was proposed in a tentative draft of a marketing plan drawn up by representatives of the Nation Wheat Growers' Association and the Northwest Wheat Growers here recently. The states concerned are Kansas, Oklahoma, Texas, North Dakota, Nebraska, Colorado, Montana, Washington, Oregon and Idaho.

The plan contemplates control of a wheat pool of 100,000,000 bushels. Conferees at the meeting said it was hoped to have the plan in operation in time to handle this year's crop.

Under the plan, as drawn, trustees would be elected from each state association to fix zones for marketing. Each zone would have a central marketing city.

MONTREAL GRAIN MEN'S VIEWS

In the opinion of representative Montreal grain brokers, the above scheme is thought to have little chance of success. The effect, they say, that such a pool would have on the grain markets would be practically negligible, as they would only control about a seventh of the wheat supply of the United States. Some brokers think that it might be run as an experiment with the idea that if it is a success that a very much larger pool will be formed. They fear, however, that such a pool would be mismanaged, and a falling market would probably break it.

PLAN WHEAT CONTROL RESOLUTION.

Ottawa.—That there will be strong pressure for the appointment of a wheat board during the coming session is evident from the opinions expressed by western members. A deputation of Saskatchewan grain growers has been here to press for the appointment of a board, and while some members of the Government are understood to be not averse to establishing such a body, the Cabinet as a whole has not yet reached a decision as to policy.

FOR SALE—One 20-horsepower I.H.C. "Mogul" oil engine. But little used. Will sell cheap. Reply Altona Mills, Stouffville, Ont.

THE CHICAGO MARKET

The following table compiled from figures furnished by Messrs. Logan & Bryan, members of the Winnipeg Grain Exchange and the Chicago Board of Trade, C.P.R. Telegraph Chambers, Montreal, show highest price levels recorded on Chicago Board of Trade, from Feb. 28, 1922, to March 13, 1922, inclusive.

	Feb. 28	Mar. 1	Mar. 2	Mar. 3	Mar. 4	Mar. 6	Mar. 7	Mar. 8	Mar. 9	Mar. 10	Mar. 11	Mar. 13
May Wheat	1.48¾	1.47½	1.46¼	1.48	1.45¼	1.43¾	1.43½	1.43	1.43	1.38	1.37⅞	1.38⅛
July Wheat	1.26	1.23⅜	1.22⅞	1.24½	1.22⅜	1.22	1.21⅜	1.21⅜	1.21¼	1.18¾	1.18½	1.19⅛
May Corn	0.69	0.68	0.67⅜	0.68¼	0.66¼	0.64⅜	0.64⅝	0.64⅛	0.65	0.62⅝	0.63½	0.63⅝
July Corn	0.71⅛	0.70	0.69½	0.70¼	0.68¾	0.67¼	0.67⅜	0.66⅞	0.68	0.65⅝	0.66⅛	0.65⅞
May Oats	0.43⅝	0.42½	0.42¼	0.42¾	0.41¾	0.41⅜	0.42⅛	0.41⅜	0.41½	0.39⅝	0.39¾	0.39⅞
July Oats	0.45¼	0.44¼	0.43⅞	0.44⅜	0.43⅜	0.43⅞	0.43⅛	0.43⅛	0.43⅜	0.41⅛	0.41⅝	0.42
May Rye	1.09¾	1.08¼	1.06⅞	1.09½	1.09⅛	1.07¾	1.08	1.09	1.09½	1.07	1.07⅛	1.07¾
July Rye	0.99¾	0.97¼	0.95¼	0.97¾	0.97⅜	0.96¼	0.96¾	0.96½	0.97	0.95¼	0.94⅞	0.95
May Barley	0.69	0.70	0.70	0.69	0.68⅞	0.67	0.69	0.68	0.65½	0 65½	0.63⅜	0.65⅞

ONTARIO

TORONTO

TORONTO MARCH 15TH, 1922

THE TORONTO MARKETS.

Flour.—The recent advances in wheat have had very little effect on the local flour as far as buying is concerned. Flour buyers are not following the wheat market to any extent. There is practically no export business in winter wheat flour, and dealers report that United States winter wheat flour is underselling Canadian flour. As the exchange situation is improving, however, it is expected that this disadvantage will quickly disappear. Late prices quoted in Toronto were forty-six shillings to forty-six shillings and six pence, c.i.f. United Kingdom points. Prices for domestic flour are unchanged, Manitoba wheat flour being quoted at $8.00, with winter wheat flour in second hand jute bags at $6.50. Very little domestic business is offering at the present time.

Millfeeds.—Prices for millfeeds are holding firm and the product is in good demand, particularly bran, for which $32 a ton can be had, although the list price is around $28, with $25 to $30 for shorts. Almost any price within reason can be had for straight car lots of bran. Shorts and feed flour are moving briskly continuously, and there is no difficulty in disposing of mill offal of all classes. The larger operations of many of the mills, owing to the sales of flour made since the advance in wheat took place, have increased the supply of feed being turned out considerably, although, of course, it is not as large as would be the case if the mills were all running at or near capacity. Screenings have all been in good demand for feeding purposes this winter. The export market in millfeeds is inclined to be rather quiet, but the United Kingdom market is absorbing considerable purchases and a fair amount of new business is being worked.

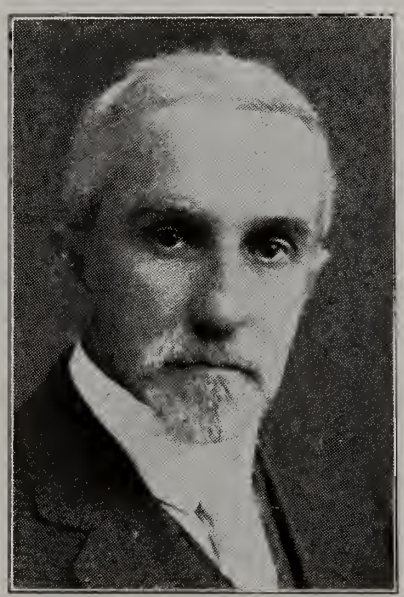
Oatmeal.—The oatmeal market is very dull, there being little demand for the product, either in the domestic or export market. The prevailing quotation is $3.10 to $3.15 per bag of 90 pounds.

Oil Meal Cake.—There is very little movement in oil meal, the commodity being too high-priced at present to attract buyers. Prices remain unchanged since last quotation.

THE GRAIN MARKETS.

Present indications are that most of the quality of Ontario wheat that is fit for milling has been marketed. Certain it is that Ontario wheat is now hard to buy. Some elevators in the country, however, are stocked with No. 1 commercial owned by farmers, who have given instructions that the wheat will not be sold until June next. In some cases holders have been asking as high as $1.40, but probably the closest range to a selling basis is $1.30 to $1.36 outside, or $1.35 to $1.41, delivered in Toronto. No. 1 Northern wheat is up around the $1.62 mark now, and Western oats are up half a cent, No. 2 selling at 62½ cents. Little Ontario oats has been marketed and so poor is the bulk of the crop that little will be sold. There is a fairly good demand for Western Canada oats, which run about 40 pounds to the bushel. The offerings of most Ontario cereals are very light owing largely to the fact that farmers are finding it more profitable to feed their grain rather than market it in the ordinary way. In connection with the recent rise in wheat it is pointed out that the movement is important, not only because of the additional revenue that will accrue to the farmers but because of the effect on the agricultural community at large. The advance has come at a time when it will tend to stimulate the farmers to a greater exertion in the spring sowing and a broad acreage, it is pointed out, will have a good effect on business.

Seeds.—Seed dealers state that while they are not yet definitely quoting selling prices, the outlook is for a good strong market this spring, especially in red clover. Supplies of choice No. 1 seed of this variety are very light and the indications are that the demand will be strong. Selling prices will be in the neighborhood of pre-war levels, and it is possible there may be an advance after the market really opens.



MR. E. PITTS, sr.
Whose up-to-date milling plant at Paris, Ont. was described in Canadian Milling & Grain Journal issue of March 1st last.

WOULD ENCOURAGE THE MILLING OF FLOUR AT HEAD OF THE LAKES.

Fort William.—That the government will see to it that the interests of Fort William as Canada's leading grain center are protected, and that excessive freight rates will not be permitted to make it advantageous for farmers and grain shippers to divert western traffic from Calgary via Vancouver through the Panama canal, so far as the government railways are concerned, was the statement made here by Hon. W. C. Kennedy, Minister of Railways, who passed through on a Canadian National special train en route to Winnipeg recently.

Hon. Mr. Kennedy stated that he would promise that the government would do all in its power to induce industrials to place mills at Fort William, so that wheat and other grains need not be handled

two or three times before being converted into flour. "I would not be willing to have the government erect such mills," he said, "because it would not be fair to private enterprise for the government to throw its weight behind such a proposition and compete with private concerns in putting up such mills. But we can do all we can to further such activities being put in motion."

ASK UNIVERSITY TO DETERMINE THE MOISTURE CONTENT OF OATS.

Regina.—In a resolution passed unanimously at the recent convention of grain growers held here, the University of Saskatchewan was requested to make a series of tests with a view to determining the moisture content of oats.

The resolution was moved by Dr. T. A. Patrick, of Yorkton, and seconded by Mr. A. Burkell, also of Yorkton. The University was asked if these tests could be made. A wire from Dr. W. C. Murray, president of University stated that the University would be glad to make the test.

The text of the resolution follows:

Whereas the Board of Grain Commissioners has prescribed 13.2 per cent. as the limit of permissible moisture in oats of all varieties and weight per bushel and has graded "tough" all oats with a higher per cent. than that prescribed:

And whereas the University of Saskatchewan is willing to make a series of tests with a view to determining the moisture content in oats of all the varieties and weights per bushel, commonly exported from its province, both when threshed under normal threshing conditions and when stored in bulk in well housed bins for two, four, six, eight and ten months;

The University is hereby requested for the information of this association to make such tests as well as similar tests of all grains."

Dublin.—Ireland has been transformed from a grain raising country into a great cattle ranch and dairy farm, with more cattle in proportion to its area than any country in Europe.

By the time of the outbreak of the "Great War" live stock raising had been carried to such a point that food, not only for population, but for feed for live stock, had to be imported. Large amounts of wheat and wheat flour were imported from the United States and in addition to linseed and cotton-seed cake there were heavy imports of corn, mostly from Argentina, for use in stock feeding.

In view of these figures and Ireland's rapid development as a live stock producing country, Canadian manufacturers and exporters of feeding stuffs might profitably look into the possibilities of this market.

The Modern Sophocles

Prosperity means good business. Good business means active buying. Buying moves in a circle. It must begin with you—and in the end it comes back to you. There are four factors in the circle of buying—the manufacturer, the jobber, the retailer and the buyer—who is YOU. Together, these four factors constitute the public, and spring from it.

The manufacturer, jobber or retailer of any commodity is in a "separate" class only so far as his own business is concerned. In every other relation of life he is one small individual in the great public, affected by the same living conditions that affect you. Outside his own business he is you—a buyer. He joins with you, therefore, in starting the buying impulse that sweeps around the circle. He, like you, buys the necessities and comforts of life from a retailer—who buys from a manufacturer—all of whom must buy from the public (you) the time, skill, knowledge, materials, etc., that the public has to sell.

When you buy, all buy—when you stop, all stop.

SAYS WESTERN TAXATION TOO HEAVY.

Ottawa.—Giving evidence before the Dominion railway Commission here recently, Dr. Robert Magill, secretary of the Winnipeg Grain Exchange, stated that freight rates and provincial and municipal taxation in the prairie provinces of Canada, more than absorbs this season the returns from all crops received by the growers and other natural sources, and if some reduction is not made, beginning with freight rates, economic disaster faces the grain growing and handling community.

WHAT A CANADIAN TRADE COMMISSIONER WRITES.

Bristol, England.

"I thank you very much for the copies of 'Canadian Milling & Grain Journal' which you have forwarded to me. I may say that I know your publication well and find it very useful. I have only just come to this office from Canada, and you may rest assured that when we are applying for publications for our next year your excellent paper will appear on the list, and we shall hope to have the pleasure of perusing it as it is most useful."

A. B. MUDDIMAN.

WE WANT **YOUR** NAME

To be listed in the Free Milling Directory of Canadian Flour Mills, managers, superintendents, head and second millers, and engineers.

IF YOU WANT TO BE INCLUDED

We must have your name and other particulars on accompanying form. Kindly fill in and return promptly.

Superintendent .....

Head Miller .....

Second Miller .....

Name of Firm .....

Address .....

Daily Capacity .....

Power Used .....

WESTERN PROVINCES

WINNIPEG

WINNIPEG MARCH 15TH. 1922

THE WINNIPEG MARKETS.

Flour.—The trade has been very active as the recently advanced prices created an excellent demand from the domestic trade who, fearing still higher prices, have shown a greater desire to lay in supplies than for many months. No further advances are anticipated at present, owing to the fact that the wheat market, which had shown an almost continuous advance since the opening of the New Year, received a setback of about 8c for the week ending March 4.

While the domestic trade has been more active, export business has been showing signs of falling off as the foreign buyer is not inclined to follow the advance. Orders now in hand for export shipment are daily becoming less, and unless there is a revival in the near future all orders will be executed, in so far as the European trade is concerned. Western mills have been able to work a fair volume of low grades to the Orient, and this business is showing signs of increasing. Western millers are in an optimistic frame of mind, having enjoyed good business throughout the winter and the February run was the largest of the year, many mills running to 100 per cent capacity.

Present prices are as follows: Top patent spring wheat $8.00 bbl., seconds $7.40, first clears $6.80, jute, mixed cars, 30-day terms, delivered at any point between Fort William and the western boundary of Manitoba. In 98-lb. cotton bags, prices are 20c. bbl. over the jute basis. Saskatchewan points take 10c under these prices, and from eastern Alberta to the Pacific Coast values rise progressively to $8.30 for top patents at Vancouver and like points. Vancouver Island takes 8.35 for top patents, and Prince Rupert $8.50.

Millfeed.—Market shows no change in prices. Trade is excellent. A heavy demand, particularly for bran, is the order of the day with all western mills. Bran is quoted to-day at $22.00 ton, and shorts at $24.00, in bags, delivered, Winnipeg territory.

Oatmeal.—Only a moderate demand is reported for oatmeal and rolled oats, both domestic and export trade being of small volume. There has been no change in prices since last report, mills quoting as follows: rolled oats, in 80-lb. cotton bags $2.50 to $2.60; oatmeal, in 98-lb. cotton bags, $3.00 to $3.20, delivered, Winnipeg territory.

Rye Products.—The market for rye products has not been showing much activity and has been dull outside of a little domestic demand. Prices have advanced 50c. since last report following the rise in other markets. Present quotations are: Best patent flour, $7.50 bbl., in 98-lb. bags; medium, $6.30; dark, $5.00; rye meal, $5.00, delivered Winnipeg territory.

Flax Seed Products.—There is a keen demand existing for oil cake and oil meal owing to the shortage of other feed stuffs, but the volume of business is not as large as might be expected due to the fact that seed is difficult to secure at present market prices. American crushers have been steady buyers on this market and are paying a premium for No. 1 Northwestern flax at Moose Jaw and Saskatoon, which curtails shipments to Winnipeg and Fort William. Ontario points have taken considerable quantities of oil cake and oil meal during the winter, but this demand is expected to fall off shortly with the coming of spring and green grass. There is a steady market the year round for oil cake in the West Indies and Bermuda, and the two local mills do considerable exporting to these countries and also to the United Kingdom. They have also received enquiries from Germany, France, Belgium and Denmark, and some small shipments have been made to the Pacific Coast.

Duing the last two months prices on oil cake and oil cake meal have advanced from $40.00 to $55.00 per ton, in car lots, and linseed oil is quoted at $1.20 per gallon, which is an advance of 30c per gallon from January 1.

THE GRAIN MARKETS.

While the undertone to the market has continued strong, prices have receded about seven cents from the high during the first week of March. This decline has been caused by liquidation by those interests who held heavy lines of "long" wheat both here and at Chicago, the latter market being relatively weaker than Winnipeg. On every break the market has received good support and there has been considerable export buying here from day to day, but on the whole the market has worked somewhat irregularly lower. This, perhaps, is not unnatural considering the enormous advance that wheat prices have experienced during the past five or six weeks. Basic conditions, however, are just as strong as they have been, which many believe can only mean one thing, namely—good prices for the balance of this crop year at least, and prices for the next crop depending on the outcome of the same.

For the immediate future no particular or drastic change in prices is anticipated. During the last month the European buyer has been a heavy purchaser of wheat in North America, Argentine and Australia, and undoubtedly large stocks of wheat are now en-passage which will put British and other importers in an easy position for the time being. There are still large stocks of surplus wheat available on this side, and unless the foreigner continues to buy on a broader basis than recently recorded, it will be difficult to hold prices at present levels.

The domestic trade is quiet, millers are buying little or just sufficient for immediate requirements, as they believe the rapid advance in prices are not warranted.

The cash demand has been fair but the offerings have not been large, and as a result the premiums have increased for spot top grades from 3c to 5c.

Oats and Barley—These markets have been very dull with an extremely ordinary trade passing in both cash and futures. Domestic demand is slow from eastern consuming centres, while present values appear out of line as regards export business. The market range has been narrow, but stocks of these commodities are not burdensome and appear to be in hands.

WINNIPEG GRAIN EXCHANGE TO BE DECENTRALIZED IF MANITOBA BUSINESS TAX IS ENFORCED.

Winnipeg.—The grain handling trade of Winnipeg, operating from the Winnipeg Grain Exchange created a sensation recently in announcing that if the government of Manitoba's business tax is enforced, and the Hon. Edward Brown says it will be, they will decentralize their business and divide it into branches in Calgary, Fort William, Regina, Saskatoon and Edmonton. The tax is two per cent on all gross receipts, no matter where earned. The companies are compelled to pay the Manitoba tax on all business which originates outside Manitoba and is completed at Fort William. It means they will conduct business from the head of the lakes and other western centers so that Winnipeg stands to lose the important place in the western grain trade which has been built up during many years. At the head offices in Winnipeg these companies employ hundreds of clerks and other office help to conduct this large business.

OBITUARY

Vancouver.—The death of Mr. J. H. Ross Gillespie, 5368 Blenheim street, general manager of the Alberta Pacific Grain Company in Vancouver, occurred recently, after a short illness. He formerly lived in Calgary. Septic meninigitis was the cause of death.

Mr. Gillespie was a prominent member of the Board of Trade and was one of those urging the shipping of grain by way of the West and the port of Vancouver.

Regina.—Mr. A. D. Millar, for many years a real estate and grain dealer was found dead at his home here recently. He had been preparing for a shooting trip and went down to his cellar, slipping on the stairs, and receiving injuries from the discharge of the gun he was carrying. Mr. Millar has been a resident of Regina for many years and was for several years an alderman.

Even with a number of failures a man can still finish a success, provided he is given a chance. The world is full of such examples.

TRADE OPPORTUNITIES

With a view to assisting the Canadian milling trade in the development of a permanent and profitable export business, "Canadian Milling & Grain Journal" publishes in each issue a selected list of trade opportunities, the investigation of which should prove of value. "Canadian Milling & Grain Journal" is taking special pains to ascertain the reliability of each opportunity presented and will gladly furnish any further information regarding them that may be desired.

THE EDITOR.

No. 235.—Mr. Joseph McComb, 39 Victoria Street, Belfast, Ireland, who is engaged as a wholesale produce and flour merchant, is open to undertake importation of lines suitable for their customers handling flour.

No. 236.—Messrs. T. D. Russell & Baird, Limited, 68 Constitution Street, Leith, Scotland, and 73 Robertson Street, Glasgow, Scotland, invite correspondence with Canadian exporters of flour, oatmeal and cereals.

No. 237.—Messrs. Fredsted & Company, Copenhagen, Denmark, wish to get in touch with Canadian manufacturers and exporters of hard spring wheat patent flour.

No. 238.—Mr. Cecil B. Facey, P.O. Box 103, Kingston, Jamaica, who is an established manufacturing representative, wishes to secure representation for Canadian exporters of flour.

No. 239.—Messrs. Young & Wilde, Limited, 62 Ninth Avenue, New York City, would like to get in touch with Canadian exporters of flour.

No. 240.—Messrs. C. C. Henriquez & Company, 11 Queen Victoria Street, London, E.C.4, would like to get in touch with representative Canadian exporters of Manitoba flour and grains.

WANT MANITOBA WHEAT RENAMED.

Saskatoon. — The agitation to have Manitoba wheat renamed, on the ground that the name does not describe the product, will be revived when the Associated Boards of Trade of Saskatchewan assemble for their annual meeting at Prince Albert shortly. Saskatchewan grain growers and the Associated Boards of Trade claim that most of the grain graded as Manitoba wheat comes from Saskatchewan, and that the name creates a wrong impression.

THE WESTERN MARKETS

The following report furnished by Messrs Baird and Botterell, 103 Grain Exchange, Winnipeg, shows daily highest price levels from Feb. 28, 1922, to March 13, 1922, inclusive.

	Feb. 28	Mar. 1	Mar. 2	Mar. 3	Mar. 4	Mar. 6	Mar. 7	Mar. 8	Mar. 9	Mar. 10	Mar. 11	Mar. 13
May Wheat	1.44¾	1.42½	1.42⅜	1.45	1.42⅞	1.42½	1.42	1.41⅛	1.41¾	1.37	1.36½	1.38⅛
July Wheat	1.37⅜	1.35	1.35⅛	1.37½	1.35¼	1.36⅝	1.35¾	1.35½	1.35½	1.31½	1.30⅞	1.32
May Flax	2.42⅜	2.40½	2.41	2.44	2.40⅝	2.39⅞	2.41	2.40½	2.41	3.38¼	2.39½	2.39⅝
July Flax	2.39½	2.38⅛	2.39	2.42⅛	2.38	2.37⅞	2.37	2.39	2.39½	2.36½	2.37⅜	2.37½
May Rye	1.10	1.08¼	1.07⅝	1.09	1.07	1.08⅝	1.07¼	1.07¾	1.07¾	1.06½	1.07	1.07¼
July Rye	1.05½	1.02⅛	1.02	1.02	1.01¾	1.02⅞	1.02⅜	1.01⅜	1.01⅜	1.01¼	1.01¼	1.01⅜
May Barley	0.69¼	0.69	0.68	0.69⅛	0.67¾	0.68	0.68¼	0.67¾	0.66⅞	0.66⅝	0.66½	0.66⅜
July Barley	0 67½	0.67⅜	0.65	0.65¾	0.64¾	0.65⅝	0.65¾	0.66½	0.64⅞	0.64½	0.64⅜	0.65
May Oats	0.51⅝	0.51½	0.51½	0.52	0.51¼	0.51⅜	0.51¼	0.50⅝	0.50½	0.48¾	0.49⅛	0.49½
July Oats	0.50¾	0.50½	0.50¾	0.51½	0.50⅝	0.50⅝	0.50¾	0.50½	0.50¼	0.48⅛	0.49	0.49¾

Foreign Flour and Grain News

English importers evidently are not disposed to operate with the Canadian wheat market in its present erratic condition, consequently the volume of business has been small of late, but the tone of the market has been steady, car lots of first patents being quoted at $8.50, second patents at $8, and strong bakers at $7.80 per barrel in jute bags, ex-track, less 10c per barrel for spot cash.

The condition of the export market for winter wheat flour was unchanged. There has been some demand from local buyers for supplies, of which the offerings have been small, but they seemed to be ample to meet immediate requirements. Car lots of choice grades are quoted at $6.75 to $7 per barrel in second-hand jute bags, ex-track, and smaller quantities at $7 to $7.25 per barrel ex-store, with winter wheat patents at $7.75 to $8 per barrel ex-store in new cotton bags. The demand for white corn flour is quiet, and prices are unchanged at $5 to $5.10 per barrel in jute bags, delivered.

A review of the world's wheat developments during the first six months of the crop year indicates an abnormally heavy absorption by importing countries; the failure of the commercial movement and distribution to confirm official crop estimates of some countries; the heavy imports by countries that heretofore have been exporters and the generally poor prospects existing over the greater part of the Northern Hemisphere for the 1922 harvest.

An analysis of the world's visible supply shows that the greater part of it is held in North America, the total being enlarged by the record heavy marketings of American producers, the receipts showing that 36.2 per cent. of the crop had been received at primary points during the first six months, as compared with an average total of only 39.5 per cent. usually received in the entire 12 months. The total receipts of Canada and the United States exceeded those of a year ago by over 90,000,000 bushels.

At the present time the world's visible supply is 233,412,000 bu. or 7,000,000 over a year ago; it was 84,387,000 under the average of the past five years. When the heavy marketings of this country are considered it constitutes one of the smallest visibles in fifteen years.

Of the 44,293,000 acres of winter wheat seeded in the States, over one half shows a condition of 80 or lower, while 17,257,000 acres show a condition of 60 or lower. The records give that only once during the past 26 years has the condition reported in December shown an improvement at harvest time.

INDIA.—The general crop situation continues highly satisfactory. In the Central Provinces, the condition of the crops is officially described as good to very good, late rains having improved wheat and grain. Both private and official reports are agreed that in the United Provinces the crops are in excellent condition. In the absence of further reports from the Punjab it is assumed that the excellent promise of the wheat and oilseed crops in that important producing province is being well maintained.

ARGENTINA.—Recent heavy rains have been of considerable benefit to the maize crop. Reduced estimates of the wheat surplus have been circulated.

AUSTRALIA.—The following official standards for wheat have been fixed: Victoria 60½ lbs. per Imperial bushel; South Australia 60 lbs., and New South Wales 61 lbs. In the voluntary pool for New South Wales are included about 4,000,000 bushels of bulk wheat, with a natural weight of nearly 62 lbs. Last season the official standard for both Victoria and South Australia was 60½ lbs.

FRANCE.—Frosts, more or less severe, were experienced throughout the country recently, but no damage to the crops has been reported. The Ministry of Agriculture have estimated the acreage under winter wheat on February 15, 1922, at 11,800,000 acres, which compares with 12,100,000 last season.

ITALY.—The weather recently has been very cold and windy. Satisfactory reports of the new crops continue to be received, and it would seem beyond question that the outlook has much improved.

ROUMANIA.—The Council of Ministers, has announced that wheat and rye together with all derivatives thereof, except bran, are declared decontrolled in the hands of their present possessors.

JUGO-SLAVIA.—It is again reported that the 1921 crop turned out below expectations. In several instances large mills have ceased working, owing to the shortage of grist and coal.

NORTH AFRICA. — More favorable growing weather has been recently experienced in Algeria, but further sowing has not been possible. Recent rains have greatly benefited the new crops in Tunis.

SOUTH AFRICA.—Further heavy rains are reported to have been somewhat unfavorable for the maize crop.

G. BRITAIN.—There are fair enquiries for home-milled flour, which has been raised 1s. (0.22) per sack at Liverpool. Bakers quoting at 45s. ($9.90), Sraight-run at 47s. ($10.34), and Patents 48s. ($10.56) to 50s. ($11.00). Foreign Flour is in moderate demand, with values 6d. (0.11) to 1s. (0.22) dearer. Manitoba Patents are being quoted at 48s. ($10.56) to 49s. ($10.78). Parcels for shipment have been advanced 2s. (0.44) to 3s. (0.66), but there is only a quiet trade passing.

URUGUAY.—The yield of wheat for the season 1921-22 is estimated at 7,275,300 centals, as compared with 4,661,000 last year, and an average of 4,938,800 during the previous five years, the increases being respectively 56 per cent. and 47 per cent. The yield of oats for the present season is estimated at 981,100 centals, as compared with 636,500 last year, and an average of 683,100 for the previous five years, the increases being respectively 54 per cent. and 44 per cent.

WANTS JOURNAL IN OFFICE.

Rotterdam, Holland.

"I am writing the Department of Trade and Commerce to include your journal in the list of publications sent to this office for the coming fiscal year."

NORMAN D. JOHNSTON.

The Elevator Operator

DETAILS OF EQUIPMENT FOR SOUTH AFRICAN ELEVATORS.

More detailed particulars in connection with the construction of the 36 grain elevators which are about to be erected in the Union of South Africa, show that British firms alone have been successful in obtaining sub-contracts.

As already stated in "Canadian Milling & Grain Journal," the main contractor, Mr. A. W. Menkins, is a Canadian. He has engaged to deliver the whole of the elevators completely erected and in running order by November 1, 1924, and will be responsible to the Railways and Harbors Administration for the whole of the work, including erection.

The main contractor has let contracts for the whole of the machinery for the large Durban elevator and the 34 country elevators to Messrs. Spencer and Co., of Melksham, Wiltshire, and for the Cape Town elevator to Messrs. Henry Simon and Co., Limited, of Manchester. Portions of the machinery will be supplied by the following firms:—

Oil engines (Messrs. Ruston and Hornsby, Limited, Lincoln), electric motors (English Electric Company, London), electric lifts (Messrs. A. and P. Steven, Glasgow), cleaning machines (Grain Cleaners, Limited, London, and Messrs. S. Howes and Co., Limited, London), driers (Ellis Drier Company, Chicago), automatic weighers and sacking weighers (Richardson Scale Company, New Jersey, U.S.A.), hopper scales (Messrs. W. and T. Avery, Limited, Birmingham), hydraulic machinery (Messrs. Fielding and Platt, Limited, Gloucester), conveyor and elevator belting (Leyland and Birmingham Rubber Company, Leyland, near Preston), capstans (New Switchgear Construction Company, London), driving chains (Hans Renold, Limited, Manchester), structural steel-work for all the elevators (Furness Shipbuilding Company), roofing materials (Messrs. Wm. Briggs and Co.).

It will be observed that in only two cases have orders been placed abroad.

Sites for Elevators.

The elevator at Durban, which will be the largest, will have a capacity of 84,000,000 lbs. It will be built at Congella, on the new wharfage area at the head of Durban Bay, which has been reclaimed in recent years alongside the main railway to the Transvaal.

The Cape Town elevator will be rather smaller, its capacity being 60,000,000 lbs., and will be erected in the docks area.

The country elevators are to be much smaller and vary in size. There will be nine of 3,600,000 lbs. capacity at Val, Kaalagte, Leeuwdoorns, Rustenburg, Maquassi, Lovat, Westminster, and one other station, and one of 4,400,000 lbs. capacity at another point. Seven will have a capacity of 5,200,000 lbs. These will be built at Lindley-road, Ficksburg, Kopjes, Potchefstroom, Makokskraal, Coligny, and Moorreesburg.

Five will be of 6,000,000 lbs. capacity each, located at Clocolan, Ventersdorp, Rendezvous, Vermaas, and Klipdale. There will be a similar number of 8,000,000 lbs. capacity, the sites being Bothaville, Senekal, Balfour, Kinross, and Ventersburg-road.

Three, of 9,600,000 lbs. capacity are to be provided—one each at Kroonstad, Bethal, and Bethlehem—and four of 11,600,000 lbs. capacity, these being located at Heilbron, Frankfort, Reitz, and Klerksdorp.

The value of the contract secured by Messrs. Spencer and Co., for the large Durban and the 34 smaller country elevators is placed by Mr. R. Murray, one of the directors of the company, at between £400,000 and £500,000, and he estimates that it will take 18 months to complete the order, which has been obtained against competition from North America and the Continent.

JAS. RICHARDSON CO. TO BUILD NEW ELEVATOR AT FORT WILLIAM.

Fort William.—Another million and a half bushel grain elevator will be erected at the head of the lakes this summer. The announcement has been officially made that the Barnett and McQueen Construction Company have been awarded the contract for the construction of a 1,500,000 bushel capacity annex to the James Richardson & Company elevator at Current River Park, Port Arthur.

During the past year the grain business of the Richardson company has expanded to such an extent that their present industrial terminal storage capacity of two million bushels was inadequate, and the decision was made to increase the capacity to three million, five hundred thousand bushels.

The new annex will be of modern reinforced construction and will be composed of a unit of forty tanks built upon the inshore or west side of the present storage unit, and construction will be commenced as soon as weather conditions permit in the spring.

TO STOP "BLOWING" IN ELEVATOR.

In spouting the stock from a cyclone dust collector to an elevator to avoid "blowing" in the elevator, place a conveyor between the collector and the elevator. Have the conveyor end about 8 or 10 inches from the end of the conveyor box and instead of a conveyor head at the end of conveyor use an ordinary hanger. Then spout from end of conveyor box to elevator. The space between end of conveyor and end of box fills up and is pushed out of box into spout leading to the elevator and the air cannot pass the choked space.

OILING UNDER SAFE CONDITIONS.

A bearing located between a wall and a large pulley is a source of danger to the oiler. A good dependable oiler will oil this bearing regularly, while an indifferent oiler will take a chance and probably neglect the bearing, thereby causing a hot box and probably a fire. A grease cup arranged so the cup is easily reached will make the condition safe. Babbitt an elbow in the oil well of the box and connect the grease cup to this elbow with enough pipe to get away from the pulley and belt. Then the oiler can work in safety and the bearing will not be neglected.

Correspondence

The following interesting letter has been written by a well-known Scotch importer of Canadian flour.

The Editor, "Canadian Milling & Grain Journal."

Dear Sir,—"As interested very largely in the Canadian flour importing trade, I want to put a point before you.

"We find one of our biggest difficulties, especially in dealing with the smaller Canadian mills, is that they have very little knowledge of what is necessary towards an export business. Many of them handle cables carelessly and they handle shipments very carelessly, and then, when complaints are made because contracts are out of date, they throw the thing up.

"Now, there is a magnificent business to be done here in Canadian flour, but a man must set his mind to it in a business-like way, and he must keep the arrangements which an importing house, as a rule, detail to him before they start business. Instead of this, many of the smaller Canadian millers drift through the thing. They are not careful about keeping shipments to date, and they are far too touchy where a dispute arises, which may be a perfectly fair business dispute. If they do not get the thing their own way, they throw it up.

"We have mills ourselves, from which we can take every bag they make through the twelve months. The result is that we have them always sold up. The benefit of this kind of thing is that the miller is working at a minimum cost and knows exactly what he can do.

"Personally I am very much interested to see the development of the Canadian flour trade here, but some of the small men make it very difficult. All the trouble cannot be on one side. With more care in Canada, the result would be that you would have a string of small successful mills through Ontario who would do far more good to themselves, and to their neighborhood, than they are doing at present."

"One reason for all this, we think, is that there is a lack of proper instruction among the younger men as to how to do the export business profitably; how to keep in touch with the steamship lines, and how to keep the trade running steadily. There is also a great lack of knowledge as to the conditions of flour in this market. They do not recognize that Glasgow, or Scotland, is a cosmopolitan market for wheat and flour, and they think that the conditions which apply locally in Ontario ought to apply in Glasgow, and as a matter of fact, they do not.

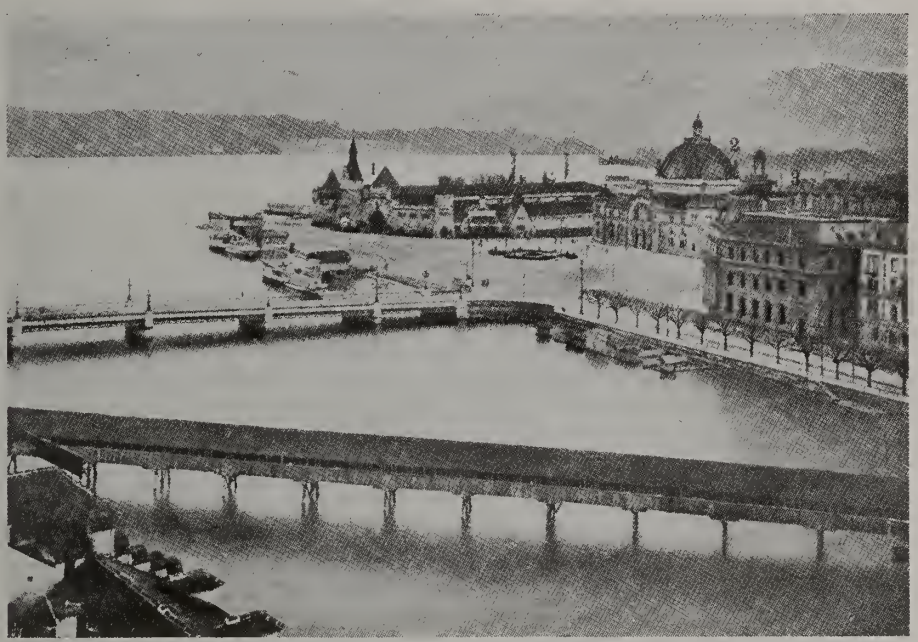
"That this is so can be easily proved by the fact that a business-like man starting as a dealer in Montreal or Toronto can do ten times the business that some of these mills do, at a profit—buying from the mills and selling to an importer. This should not be the case, and would not be if some of these men were better posted as to how to do their work.

"Personally, I have visited a lot of these small mills, and their business, even by cable, is done in the most haphazard way.

"Would it not be possible in Toronto, in connection with some of the colleges, or possibly at the instigation of the Dominion Millers' Association, to give a certain amount of instruction, by lecture or otherwise, to men willing to attend, dealing with the proper handling of export goods. It would mean a better price to the miller, and a far steadier business.

"A further difficulty is that a lot of these millers take the export business at one portion of the year, and have nothing to do with it at another portion of the year. This, of course, is fatal, as it does not keep their brands steadily on the market.

"The science of exporting properly is far better understood in America than in Canada, and there is no reason why it should be, if a little trouble is taken in the matter. Yours very truly, **M. R.**



LUCERNE, SWITZERLAND

World famous beauty spot which was the scene of the British Dominions Products Exhibition last year

Elevator, Mill & Personal Notes

Hampton, N.B.—A grist mill owned by W. H. Hill was totally destroyed by fire recently. The flames spread so rapidly that the entire structure burned to the ground within a half hour. The mill, which was situated about 300 yards from the railway station, was an up-to-date one. The owners had installed new floors, gristing equipment with a capacity of fifty barrels a day, and also machinery for handling corn and buckwheat.

Fort William, Ont.—The Fegles Bellows Construction Co. of Buffalo, N.Y., has been awarded the contract for the construction here of a 700,000 bushel elevator, a concrete wharf and a travelling marine tower for the Archer Daniels Linseed Co. of Buffalo, N. Y. Construction will start immediately. Excavation clearing work is already under way and the contract will be completed by the end of the summer.

Teeterville, Ont.—Mr. N. J. H. Green has installed a 50-barrel Midget Marvel Mill, purchased from the Pollard Manufacturing Co., Ltd., Niagara Falls, Ont.

North Stanbridge, P.Q.—The grist mill of Mr. Ernest Bommoe was burned to the ground recently.

Holmfield, Man.—Business operations have been resumed at the Harrison Flour Mill here. The plant has been undergoing extensive improvements and is now modern and up-to-date in every particular.

Vegreville, Alta.—The 60-barrel mill of Mr. Robert Fairbairn has been taken over by the Reesor-Richardson Flour Mills Co., Ltd., which will carry on the business.

Dunnville, Ont.—The Peninsular Flour Mills Co., Ltd., have obtained a Federal charter. The new company will build a flour mill and elevator here.

Rosengard, Man.—The equipment of the Rosengard Flour Mill has been purchased by Messrs. P. T. Barkman, Son & Co., Ltd., of Steinbach, Man., who are establishing a modern flour mill at that point.

Basswood, Man.—The Ogilvie Flour Co's elevator and flour shed here was burned to the ground recently. The elevator contained about 25,000 bushels of grain, and almost a carload of flour was in the shed. The cause of the fire is unknown.

Port Arthur, Ont.—James Richardson & Sons, Limited, have awarded a contract for the construction of a million and a half bushels storage annex to their present plant at Port Arthur, to the Barnett & McQueen Company. The annex will bring the Richardson elevator's capacity to 3,500,000 bushels.

Port Arthur, Ont.—A building permit has been issued for the construction of an elevator by Messrs. Parrish & Heimbecker, of Winnipeg, on the Port Arthur water front. The permit calls for an all-concrete building. It is understood the elevator is to have a capacity of 250,000 bushels.

Owen Sound, Ont.—Suffering from a protracted and probably fatal disease, Mr. John Inglis, a well-known miller at Inglis Falls, two miles south of Owen Sound, took his own life recently.

Mr. D. A. Burgess, of Carleton Place, Ont., was a recent visitor in Montreal.

Mr. James Carruthers, president of James Carruthers & Co., Ltd., grain dealers and exporters, was a visitor in Winnipeg for the recent wedding of his grand-daughter. During his stay in the city Mr. Carruthers, in company with Mr. Capel Tilt, Winnipeg manager of the Carruthers Company, visited the Grain Exchange, where he was warmly welcomed by the members.

Dr. Robert Magill, secretary of the Winnipeg Grain Exchange, was a recent visitor in Ottawa.

Col. J. S. Dennis, chief commissioner of the Department of Colonization and Development of the Canadian Pacific Railway Company, has notified "Save the Children Fund" headquarters at Ottawa that the C. P. R. has contributed 300 bags of flour towards the relief of starving children in the Volga district of Russia.

Mr. W. C. Horeau, export representative of the Interprovincial Flour Mills Co., Ltd., Saskatoon, Sask., was a recent visitor in the Chicago market.

Mr. Ernest S. Parker, cash grain broker of Winnipeg, was a recent visitor at the New York Grain Exchange.

Mr. J. E. Macfarlane, general manager of the Western Canada Flour Mills Co., Ltd., Toronto, was a recent visitor in Montreal.

Mr. Gordon Hunt, of Hunt Brothers, millers, London, Ont., was a recent Toronto business visitor.

Mr. Theodore Pfeffer, of the Pfeffer Milling Company, Milverton, Ont., has been calling on the Toronto milling trade.

Mr. James A. Robb, of the Globe Grain Company, Winnipeg, was a caller at the office of Messrs. C. R. Vannatter & Co., Ltd., Dominion Bank Building, Toronto, recenly.

Mr. R. J. McGraw, of Vancouver, well-known in the western milling trade, is spending some time in the east and called on the Toronto milling trade recently.

Mr. J. G. Wolverton, president of the Wolverton Milling Company, Wolverton, Ont., was a recent visitor to the grain offices in the Toronto Board of Trade Building.

Mr. W. A. Moore, of the Georgian Bay Milling Company, was a recent visitor to Toronto.

Mr. H. L. Rice, of the St. Mary's Milling Company, St. Mary's, Ont., spent a few days in Toronto on business lately.

Mr. R. A. Thompson, of Lynden, Ont., president of the Dominion Millers' Association, was a recent caller at the head office of the Association in Toronto.

Mr. James Stewart, president of the Maple Leaf Milling Company, Ltd., Winnipeg, spent some time at the head office of the company in Toronto recently before proceeding to New York.

Mr. E. H. Keyes, of the sales staff of the Huntley Manufacturing Company, Ltd., Tillsonburg, Ont., was a recent visitor in Montreal.

The Application of Cost Accounting to Flour Milling

The costs of flour manufacture, like any other manufacturing industry, are subject to almost infinite separation and analysis. There are two evils in accounting generally: first, systems that are too elementary in their construction and are, therefore, not capable of analysis for statistical purposes; and, second, systems, on the opposite hand, that are so involved and intricate that essential facts are buried in a maze of figures.

It is unfortunate rather than otherwise that milling in many cases has shown profits in spite of inadequate cost systems and control, for the sudden necessity of cutting costs too quick for the purpose of self-preservation has been the more difficult and disastrous. No one to-day questions the necessity of eliminating waste, energy and unproductive expenditure, and the only basis for determining these items is a carefully constructed cost system that honestly reflects the activity of the business.

There are doubtless many small millers in Canada to-day who are selling flour at prices which are very much below cost. Those who know that they are doing so are inviting disaster.

Division of Milling Costs

There are two broad divisions into which milling costs should be divided: production costs, and selling costs. Each of these divisions exists between them and a very distinct separation should be made between the charges to one and the charges to the other. Either the production division, or the selling division, may be excellently managed and yet the business as a whole be entirely unprofitable, or vice versa. Only when absolute distinction is made between these two broad divisions is it possible to place responsibility, which is the ultimate object of cost and statistical accounting.

As millers are interested primarily in the cost of manufacturing a barrel of flour, production costs will be considered first. Production costs may be divided into three divisions: 1. Material or Prime Costs. 2. Labor. 3. Burden of Overhead.

Material, or prime costs are, of course, those charges for material used and items applicable to bringing those materials into condition for manufacture. This would include the actual cost of the wheat ground, inbound freight or transit charges, buying costs, a certain percentage of administration expense, unloading, cleaning, etc.

A word might be said regarding the records necessary to establish these costs. Every mill should have a complete record of all grain received, which may be entered into a statistical ledger with a number of special columns. Such a record need not show costs in dollars and cents. A second column should be available to enter the grain ground, taken from the record of the automatic scale, which is as an important machine in a mill as any other piece of machinery. An automatic scale should be used to determine the amount of screenings removed from wheat received. Another column in the ledger is prepared for the screenings. This ledger may be extended to show the number of barrels of flour made, the feed manufactured, and many other items of importance. With such a record, any day, or any hour of the day, the exact amount of grain in the elevator can be quickly determined. Such a record is also very valuable for insurance purposes.

Dividing the Labor Costs.

The second division of production costs, Labor, should require but little special attention except to note several separations of value for statistical purposes. It seems advisable to separate the labor costs of milling, such as wages of millers, oilers, etc., from those of men employed in packing and loading, etc. Should labor costs be extremely high it is useful to know what department is responsible for the heavy charges. The record of labor costs may be kept in any of the standard forms for such purposes, or even in the general ledger, although a special ledger is valuable as it will show the number of men employed at any given time, the hours employed, the rate of wage and other information.

Burden and Overhead Costs

The third division, Burden or Overhead, is more difficult to handle, as the large number of accounting theories advanced will show. The purpose of cost accounting must not be lost sight of. It is primarily to determine just what it is costing to make a barrel of flour, not in a particular year after the books are closed and the loss or gain determined, but on any given day when you are asked to make a quotation on a round lot of flour. This requires, then, a careful analysis of burden costs. The charges to Burden or Overhead are usually well known. They include such charges as taxes, interest, insurance, rent, superintendence; administration, heat, light and power. The distribution of Burden may be made by any plan which will give a close approximation to the proportional benefit which each division receives. The large proportion of the Burden costs are chargeable to Production, although some items may be, in part, charges against Selling. But few of the items require special attention.

Ed. Note.—Further articles bearing on the practical application of cost accounting to the manufacture of flour will appear in future issues of Canadian Milling & Grain Journal.

BAD MANAGEMENT MEANS POOR MILLING.

Poor milling is traceable to poor management. If the manager knows his business he will not stand for poor milling. He will put his mill in shape to do good work. He will provide good grain, pay a miller a living wage, and then not be satisfied with anything less than first-class work. But many managers do not know what first-class work is. Some expect something from almost nothing, others do not get what is coming to them from the means at hand.

The manager who will insist that his miller do all manner of work besides attending the mill is going to fail. A good miller is a skilled artisan. He did not school himself that he might act as a skilled miller and at the same time be a roustabout. He will be ready to lend a hand when he can, but does not want to be compelled to be ever a roustabout. Not only this, but if the miller must be in too many places his mill will suffer. Something will be neglected.

THE PRACTICAL MILLER

THE IMPORTANCE OF SCALPING IN MODERN MILLING PRACTICE.

That part of modern milling known as scalping is very seriously neglected and too often a miller feels that so long as he has a scalp cloth on the stock, that is sufficient; but scalping is one of the most important parts in designing a flow sheet for a mill. It takes one of experience and knowledge of numbers of cloths to be able to place the proper numbers on the different stocks so as to remove impurities as they should be removed.

It is a separation that is from one extreme to the other; the overs of scalp cloths go either to feed or to the tail of mill, while the throughs of the scalp cloths are sent higher up in the mill after the flour has been removed. The impurities range in size from a very small particle to a large one, it being the idea to remove all of these branny particles that it is possible to remove, at each operation and, at the same time, not to tail over any product that should go through the cloth. As results oftentimes are dependent on the right number of scalp cloths being used, this part of the milling system should be studied carefully.

It is a fact that a heavily loaded cloth does not bolt as freely as one with a light load; therefore, it is necessary to have sufficient capacity in order to bolt the tail overs dry and at the same time keep the throughs clean.

Where a small amount of surface is used the cloth has to be very coarse which allows a large percentage of impurities to pass through and down to the next reduction, there to be ground again with middlings, causing an off color and an impure flour because these impurities have been reduced finer and should have been taken out on the scalp cloth just ahead.

Where the miller finds that the scalp cloths are too coarse and that there is a heavy load on the section, then it is better to take out all the flour possible and place the scalp cloth on the bottom sieve of the section. Since the flour has been removed, the stock will bolt more freely, which makes it possible to use a scalp cloth on the bottom sieve five to six numbers finer than could have been used in the middle or on the top; therefore one is removing a larger per cent of impurities or, in other words, making a closer separation of the pure from the impure.

A Special Scalp Section.

When one approaches the tail of the mill, the middlings contain a larger per cent of gluten; also, a large per cent of other fine impurities; therefore, it is harder to make a separation near the tail than at the head of the mill. It would be much better if one whole section were used as a scalp section when handling stocks near the tail of the mill, starting at the top with a coarse cloth and gradually fining up until the bottom cloth is at least ten numbers finer than top cloth. This would naturally make a more complete separation.

It has sometimes been found better to use one or two cloths and to make two separations on the bottom cloth. The overs of bottom cloth which should be sent to a roll would be freer of impurities because the product had been scalped through cloths of a very fine mesh.

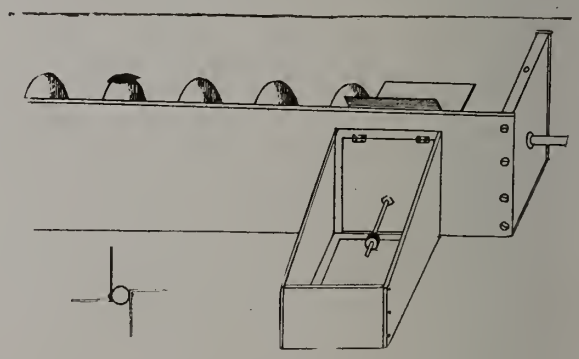
With this reduction would be more quality made because there would not be the heavy branny particles passing between the rolls and interfering with a good reduction. Branny particles, mingled with small middlings, holds the roll apart, making it impossible to reduce the fine middlings. It also interferes with the roll flattening the finer branny particles and therefore purification has been lessened.

Making an improvement of this kind near the tail of the mill has been found to raise the quality faster than when making a 100 per cent grade.

THE REDUCTION OF SOFT STOCK.

A practical miller had some soft stock that needed reducing which was going through at conveyor, and as it was not practicable to re-elevate and spout to machine he fixed the tail of the conveyor to handle it.

The sketch herewith shows the general layout of his ingenious idea. About 3 inches from the tail end of the conveyor box an opening (size 4 x 5 inches for a 6-inch conveyor) was cut in side of box. A piece of sheet iron, or old hand saw blade, cut one-quarter inch larger than the opening and hung by hinges from the top, made the gate. About 2 inches from bottom of gate a hole was drilled, through



which was fastened a 5 16-inch round rod six inches long, threaded five-eighths of an inch, so that a nut on each side of gate would hold it firm. A two-pound lead weight fastened on rod was held by a thumb screw. The hole through the weight was drilled one-half inch off centre.

Enough of the flights on conveyor were cut off to allow for 4-inch paddles, as shown in the sketch. At the lower left hand is shown the way the paddles are fastened to shaft. If wood conveyor is used, however, enough of the flights should be removed to allow for paddles, and 2 or 3 placed in each flat surface of conveyor shaft opposite gate. The cover should be tight and fastened on with screws; the cover on pocket should be removable.

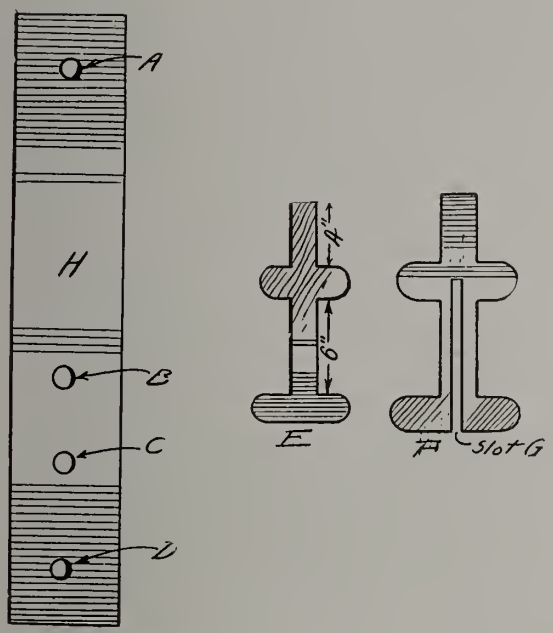
It is reported from the office of the Canadian Trade Commissioner in Havana that as Canadian flour is now selling in that city at $7.10 and United States flour at $7.75, there is a good opening in that market for exporters of the Dominion.

THE PRACTICAL MILLER

MEASURING AND CUTTING TWINE.

A handy measurer and cutter for the various lengths of twine for sewing flour and grain sacks is made as follows:

H is a board about 4 inches thick and 8 inches wide and about 48 inches long with four holes 1 inch in diameter bored in for the different lengths required. Correct lengths are about as follows: *A* to *B*, 30 inches for sewing 98s or halves; *A* to *C*, 37 inches for sewing 140s or jutes; *A* to *D*, 41 inches



for sewing 49s or quarters. Some sewers like longer or shorter twine, which can be made by boring several holes below or above *A*.

To make pieces *E* and *F* take hardwood and shape them up as shown; then make a narrow slot, *G*, in *F*, to draw knife through. To use, nail *H* to wall at sufficient height, place pin end of *E* in hole *A*, and *F* in lower hole. Hold end of twine at *F* and wind around *A* and back again to *F*; keep winding until space between knobs is full then take a long bladed knife and draw through slot cutting the twine. This will give a double twine of the proper length.

MILLERS AND CHEMICAL KNOWLEDGE.

With his limited knowledge of chemistry the miller is most interested in the gluten-proteins and the mineral matter, since he hears most often about the deficiency of the one, and the superabundance of the other. Of enzymes he has heard comparatively little; and he is not greatly concerned with fats, since the modern process of milling practically removes the germ before it has an opportunity to become incorporated in the flour. He sometimes hears a rumor that certain discoveries concerning amino compounds, soluble proteins, and diastatic activity have been made; but, as he doesn't get any very exhaustive information on the subjects he is only mildly interested.

Wheat is said to be the only grain containing proteins that will, under certain conditions, form a coherent mass, called gluten. These essential proteins are two in number, and have been named gliadin and glutenin. Included in the coherent mass are other proteins in small quantities; but most authorities agree that gliadin and glutenin are the only two essential. But though these two ingredients may be the only proteins requisite, it is undoubtedly true that gluten, as millers understand the meaning of the word, must have other constituents, also, a coherent mass cannot be formed except in the presence of water; and it appears from the evidence obtainable that certain salts, or weak acids and alkalies that, upon combining, will form salts, must also be present.

The Formation of Glutin

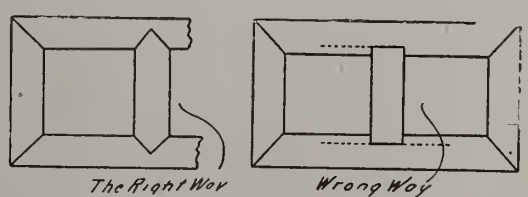
Whether the formation of gluten is the effect of the action of a ferment, or whether it is caused by electrolisis, induced by the combining of the acids and alkalies, seems to be a disputed question. Millers do know, however, that gluten may be formed in flour by the addition of water; and they know that it may be dried and powdered, and then re-formed by the simple addition of water.

From the standpoint of the practical miller the chemical composition and the physical characteristics of wheat are so closely co-related that a knowledge of the one without a knowledge of the other is of little benefit. Wheat is composed of many elements and compounds of elements; but for practical purposes these substances may be divided into three groups: the carbohydrates, the proteins and the mineral matter. Wheat also contains water which cannot be removed without causing a physical and chemical change in the grain. Water must also, then, be considered a constituent of wheat.

The carbohydrates may be again divided into fats, sugars, cellulose, and starch; the proteins into gluten-protein and non-gluten proteins, the latter including the enzymes of the wheat. The fats are contained principally in the germ, and the greater part of the mineral matter, or ash, also resides in the germ, and in the outer covering, or bran.

ADJUSTING SPOUT TO CAP.

A spout being adjusted to the type of cap shown will split out at the dotted lines if the toe comes in the centre. The accompanying sketches explain



how it should be done, and nothing further is needed to make it clear to the millwright-miller who wants to make a spout.

THE PRACTICAL MILLER

WHAT THE MILL OILER OUGHT TO KNOW.

The job of oiler in a mill while seemingly a minor one, is one of the greatest importance, for upon it depends the successful operation of the mill.

If the oiler is observant, he may become a first-class miller in a short time, for he can become thoroughly conversant with every part of every machine that needs lubricating.

He can become an artist at oiling, or he may be an incompetent and allow the mill to be destroyed by fire on account of his ignorance.

Every box, bearing, or journal, ought to be kept clean and the oil inlet free from obstruction to allow the oil to enter the bearing and not pass over as so often done, leaving the box to cut or heat, and often be ruined, all of which would not have happened if the workman had been worthy of trust.

A bearing needs just enough oil to make a film between the box and the shaft about as thin as a sheet of writing paper. Yet one will see oil poured on bearings until there is a pool on the floor a mouse could swim in.

Heavy shafting standing over night may squeeze or force all the oil out of a bearing, and it is well to oil up before starting, especially the bearings having great pressure.

Cooling Overhead Bearings.

By running the water on the shaft first, it will contract first and relieve the pressure on the box, causing less friction, less oil, and less power.

The oiler can save a great deal of expense in power by careful and systematic oiling, for one bearing can slow down a mill if it becomes dry and not properly attended to.

The oiler may become familiar with the oil he is using by watching its action on each bearing and in this way become a money saver in oil, for putting a thin, non-resistant oil on a bearing of great pressure is the same as pouring water on a duck's back.

To control a hot bearing, mix powdered sulphur or graphite with the oil, and pour a little of it into the bearing every few minutes until it is cooled off.

The oiler should keep each bearing as clean as possible, for one never can be sure against a fire from a hot, dirty bearing.

It is the same with oiling as it is with anything else; if it is worth doing at all, it is worth doing well.

OLD BELTING IS WORTH MONEY.

In many large flour mills, and grain elevators where leather belting is used in large quantities to transmit the power to shafting and machines, there is generally to be found a scrap heap of old belting.

Old belts, parts of old belts and scraps trimmed off by the belt man in making repairs lie in a mingled heap. Here and there is a piece that has been torn out by lacing, here and there a piece that has been badly "burned" by excessive slippage, and all more or less covered with a greasy composition of dirt and machine oils.

When the pile gets big enough perhaps it is sold for junk, or periodically it may be loaded on a truck and taken to the boilers to add fuel to the flames.

Unwittingly the superintendent or foreman who permits this practice to be carried on is virtually throwing away his employer's capital. Although he may not realize it, a large percentage of that belting is still good, despite its looks, and can be remade into serviceable belting at a great saving.

Renovated belting is what the belt makers call this remade or reclaimed belting and "renovated belting" is a good name for it, as all who have witnessed the transition of a pile of junk belting to its serviceable state will attest.

As it comes to the belting factory it gives the impression to anyone but a practical belt maker of having run its last race. Picking up a piece of belt from the scrap pile leads one to wonder what could possibly ever be done with it, so heavily it is loaded with grease, or so badly is it torn.

Details of Renovation Process.

How this "junk" is converted into valuable belting is an interesting story.

First the belting is cleaned, not by the ordinary naphtha process employed by the belt user when his belts get soaked with oils that fly from the shaft bearings and machines, but through a chemical process that is guarded as a commercial secret, with special machinery designed for the purpose.

Having been thoroughly cleaned and divested of every particle of grease and dirt, the belting is "broken down"; that is, the cemented parts are ripped open. Then the scraps are graded, just as new belting. Skilled workmen are essential here. Some of the scraps have to be thrown away entirely, while the rest are graded to be re-made into belting of uniform size, strength and elasticity. About 60 per cent. of the scraps are usable as against 40 per cent discarded.

The grading done, the scraps are then made up into belting about the same as new belting is made up, although greater skill is perhaps necessary to get a balanced construction, some of the pieces being as small as 12 ins. in length.

BAKING QUALITIES AND WHEAT VALUES

The value of baking tests, is entirely comparative. The patent flour has the best quality as indicated by color, high loaf volume and low bread yield. The straight flour has more strength, but not as good quality as the patent, as indicated by slightly poorer color, lower loaf volume and larger bread yield. The clear and low grade flours have still greater strength and accordingly lower quality as indicated by still poorer color, lower loaf volume and larger bread yield. With these general comparisons will continue with specific comparative qualities of the hard spring and winter wheat flours. At the present time the hard winter wheat flour will absorb the same amount of water as the hard spring wheat flour, viz.: Patents 60 per cent., straights, clears and low grades increasing respectively to about 65 per cent. They likewise will make the same loaf volume as the hard spring, as well as producing as large a bread yield. The percentage of net gluten in hard winter wheat flour obtained chemically on straight flours average about 12 per cent., with some

THE PRACTICAL MILLER

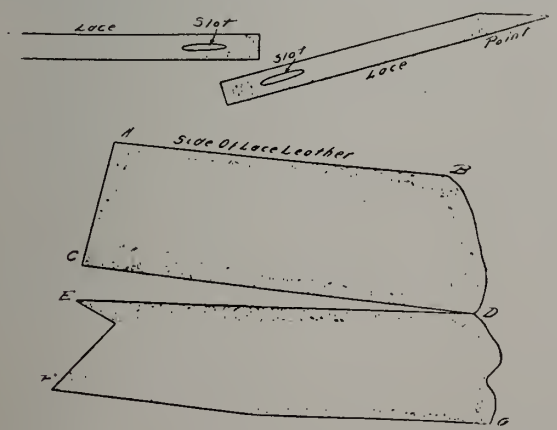
as high as 15.5 per cent. on the new wheat crop. Patents 8.5 per cent. The wet gluten may be estimated by multiplying the net gluten by three. This is as high a gluten content as may be found in any hard wheat flour at any time. Stern experience, gained at considerable cost to both baker and miller, has proven beyond the question of a doubt that the flour must have a goodly gluten content to produce a dough that will stand and not be "runny," thereby making good bread.

The starch cells, when heated, will expand and absorb water, but will not stand up unless supported by the tenacious gluten, which raised by the carbonic acid gas bubbles is formed into a solid state by the intense heat of the oven, furnishing a framework, or backbone for the loaf. The hard winter wheat of the last crop showed an average of about 9 per cent. net gluten in the yellow berry wheat and about 11 per cent. net gluten in the turkey wheat. It was recognized that the hard winter wheat gluten content last year was equal to that of the hard spring wheat, but as to the comparison this year, one cannot say until one has had an opportunity of analyzing the new hard spring wheat crop, however, as the hard winter variety is as strong as may be expected of hard wheat, the comparison cannot be detrimental thereto. These two varieties of hard wheat when having a normal percentage of gluten are the best for bread making. Some of the soft winter wheat flours, however, will sometimes make a greater loaf volume, but do not have the strength of the hard wheat flours for bread yield.

The poor quality of flour causing "runny dough" and other troubles of the baker, is owing to low gluten content and unsound flour milled from unsound wheat, occasioned by excessive moisture and also the presence of must, smut, etc., in the wheat are some of the ills befalling flour.

HOW TO LACE BELTS CORRECTLY.

The logical way to lace belts is with rawhide lacing. It is an old and tried method, and has stood the test for years, but often there is a tendency to use cheap lacing; then the lace must be wider, and



larger holes are made in the belt. These holes become larger in use and the belt goes to pieces at the joint. The extra cost of good lacing is small, but the saving to the belt is great, and it pays many times over to pay more and get the best lace obtainable. Let the quality of lace be better, and let the width be narrower. It is at joints as everyone knows that the belt is weakest, so it is economical to use the best lace possible to obtain.

Lace leather is relatively high in price, and the short pieces should be worked in, when, as often happens, part of the lace is broken, one can join a piece on, saving the lace and time. Here is one way of joining two laces: Cut the end of lace off square and cut a slot about half an inch from the end. Do the same with the piece of lace you wish to finish with and slip the slot in lacing over end of lace; pull lace through other slot and you have a good joined lace to finish with, as shown in the upper part of sketch herewith.

In cutting up a side of lace leather cut the side about half as shown in lower part of sketch. Cut the wide and heavy laces $\frac{5}{8}$, $\frac{3}{4}$ and $\frac{7}{8}$ of an inch from the line *AB*. Cut the medium and heavy laces $\frac{3}{8}$ and $\frac{1}{2}$ of an inch from the center along the lines *CD* and *ED*. Cut out from *D* toward *C* and *E*. Cut the light laces $\frac{1}{4}$ to 5-16 and sometimes $\frac{3}{8}$ of an inch from the line *FG*. The part *AB* in the backbone line and the leather here is the heaviest; *FG* is the highest section and therefore not suitable for wider laces. Widths and lengths of laces for leather belting are as follows:

Width Of Belt	Width Of Lace To Use	Number Of Holes	Punch Number
1-1/2 in.	1/4"	3	6
2 in	5/16"	3	6
2 1/2 in	5/16"	3	6
3-3 1/2 in	5/16"	5	6
4 in	3/8"	5	8
4 1/2 - 5 in	3/8"	5	8
5 1/2 - 6 in.	3/8"	7	8
6 1/2 - 7 in	7/16"	7	8
8 in	7/16 or 1/2"	9	8
10 in	1/2"	9	10
12 in	1/2 or 5/8"	11	10 or 12

In case one is lacing a belt by the hinge method, the holes are not punched opposite each other and one end of the belt should have one more punch hole than the other end. Start the lace from the end of belt containing the most punch holes.

HOW DO YOU DO YOUR REBOLTING?

Some of the best mills in the country are using rebolting reels for rebolting their finished flour. This, it would appear, is good practice and it would be an opportune subject for discussion at any time. Why not discuss this subject for the good of all? It can be no harm and will do a lot of good among millers to know more about the subject. A rebolting reel is nothing more than a reel covered with silk bolting cloth which rebolts all the finished flour. There are several things that may be considered in connection with this matter. The cloth numbers used in the original bolting, the amount to be rebolted, the size and make of the rebolter, whether the wheat is soft or hard, etc. Then, too, it must not be forgotten that there is some specky stock tailing over the reel and this must be disposed of. How do you do this and what benefits do you get from rebolting? Write us your personal experiences in your own way.

THE PRACTICAL MILLER

CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

FOR SALE—50-barrel Midget Marvel Mill with elevators, beltings, etc., and complete installation for flour mill plant. Also grain grinder, ton per hour capacity. Good reasons given for wanting to dispose. Will sell cheap. Terms given for satisfactory paper. Reply Box 145, Carleton Place, Ont.

WANTED.—Grain Scourer, capacity two to four hundred bushels per hour. State H.P. required to operate. Machine must be in good working order. Reply Box 105, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED — By Head Miller, with 20 years practical experience in modern Canadian mills up to 4,000 barrels capacity. Can guarantee best results as to quality and yield on both hard and soft wheat, and maintain mill at highest point of efficiency. At present in charge of a 1,000 barrel plant. Reply Box 85, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

PRACTICAL MILLER with 23 years experience seeks position with plant having daily capacity of 250 barrels or upwards. Can furnish excellent references. Reply Box 82, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—A 50-barrel Midget Marvel Mill, also complete installation of a flour milling plant. In use about three months. Machinery must be moved from actual premises. Good price for cash. Reply Box 103, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Head miller, with twenty years experience in 150 and 275 barrel mills, and still employed, is desirious of making a change. Applicant is 36 years of age, married, and can furnish excellent references. Reply Box 84, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

SALESMAN WANTED for the Province of Quebec. State requirements, experience and salary wanted. Reply Box 102, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

WHEAT TESTER WANTED.—Must be in first class condition, and reasonable in price. Reply Mr. Charles Wyild, Ripley, Ont.

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THE PRACTICAL MILLER

WANTED—A high grade man to represent in Western Canada a leading manufacturer of grain cleaning and special machinery, on straight salary basis. Prefer a young hustler, a man of good appearance, one not afraid of work and with some experience in elevator and flour mill work, and with some acquaintance among the trade in the territory named. Apply as below, stating age, whether married or single, experience, salary expected and other information available. Will be required to reside in the territory.—Address Golden Opportunity, c/o Canadian Milling & Grain Journal, Dubrule Building, Phillips Sq., Montreal, P.Q.

FLOUR SALESMAN seeks position. Has splendid connection in Montreal and Quebec. Speaks French and English fluently. Prefers mill handling Manitoba wheat. Knows business thoroughly. Good credit man. Reply Box 90, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED—Best price on second-hand Midget Marvel Mill, also, terms, if any. Reply Box 93, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED TO EXCHANGE—A 20-inch McLachlan Chopper for a 15-inch Moore or Vessot, after April, or will buy. Reply F. H. Robinson, merchant miller, Cookstown, Ont.

MANAGER WANTED—Modern flour mill in Ontario requires the services of a first class manager. Close knowledge of flour market a prime essential. One with record as a business getter will receive preferred consideration. State age and salary expected. Reply Box 87, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

FLOUR SALESMAN open for immediate engagement in the Maritime Provinces. Experienced. Reply Box 104, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FLOUR SALESMAN, speaking English, French and Spanish, seeks connection with milling concern. Reply Box 106, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Miller, thirty-seven years of age, is open to take charge of small or medium-sized mill, or to take position as second miller in large plant. Has had twenty years experience. Thoroughly familiar with all branches of milling. Can furnish excellent references. Reply Box 107, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

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The Question Box

With a view to making this department one of real service, "Canadian Milling & Grain Journal" cordially invites its readers to send in their problems to The Question Box. There are but very few millers or elevator operators who do not have worries in the proper conduct of their plants. It may be due to lack of experience or inability to trace cause and effect. The logical and sensible thing to do is to ask someone who may possibly know. Often he is not at hand, and still oftener the perplexed miller or elevator operator does not want to show his lack of knowledge. Under these circumstances he can address his inquiry to the craft through this journal. His name will not be divulged if he wishes to remain incognito. Someone is sure to reply who has had similar problems to meet or similar questions to ask. We guarantee to devote all the space necessary to the asking and answering of questions, so do not be backward in sending them in.

THE EDITOR.

QUESTION.—Which is the better, a 75 per cent. patent or a 95 per cent., and why?—F. B.

ANSWER.—In some cases a 95 per cent. may bake a superior loaf to a 65 per cent. or a 75 per cent. patent. The reasons for this are of a highly technical character, and it would be very difficult to explain them. Even experts do not agree on these reasons, and it would be presumptuous for an operative miller to say why it is so. It is possibly true, however, that the first reductions on middlings have a tendency to shatter the flour cells by the employment of a cracking action. The starch granules, which form the major part of the flour cell, are embedded in the gluten material within the flour cell in the same manner that rubble, or broken stone, is embedded in the mortar of concrete. Some of these starch granules fall out whole, and free from the gluten material; and the latter, being tougher than the starch, is "ironed out" slightly by the action of the rolls. Some of the gluten material is removed by the scalps, and some particles, being smaller, though not small enough to pass through the flour cloths, is sent to the next reduction rolls. This procedure is carried on for some distance down the line, each succeeding middlings reduction producing a flour with a higher gluten content, as the gluten material is gradually reduced. The tailings flours are high in gluten, though they also contain a great deal of finely divided fibre, gathered in the form of flakes, and pulverized by the rolls. Because of their high ash content these tailings flours cannot be included in the short patent, and are therefore sent to the clear. Though high in gluten content, the pulverized fibre mechanically interferes with its coherency, and this gluten is said to be of poor quality.

A patent flour made from the first middlings reduction, alone, would not be so good as one made from the first five, for the reasons stated; but it would cost more, since the remaining flour would have to be sold for a lower price without it. For the same reason a 75 per cent. patent would cost more than a 95 per cent. flour; and, judging value from the flour's ability to produce a loaf of good color, texture, size and form, the 75 per cent. is usually worth more.—M. C.

The Duster

". . . the party did not break up until the hour of midnight was well pasted." From an account of a supper-party in a Fort William newspaper. We trust those who enjoyed the party did not find themselves in a like condition afterwards.

Already we hear someone rise to remark that it is only down here in Quebec that parties of that kind are held.

Even so brother, even so. You know the story of "the hair o' the dog that bit ye?"

TO-DAY'S BEST STORY

One Sunday two lovers went to church. When the collection was being taken up the young man explored his pockets, and finding nothing, whispered to his sweetheart:

"I haven't a cent. I changed my pants."

Meanwhile the girl had been searching her bag, and finding nothing, blushed rosy red and said:

"I'm in the same predicament."

It occurs to us that the reason married men do not keep up with the styles like single men, is because there is not so much change in married men's clothes.

The Client—I bought and paid for two dozen glass decanters that were advertised at $6 a dozen f. o. b., and when they were delivered they were empty.

The Lawyer—Well, what did you expect?

"Full of booze. What else does f. o. b. mean?"

Rufus Redd Dogg

"Et seems t' me," remarked Rufus Redd Dogg drily as he slowly took off his spectacles and wiped them with a piece surreptitiously torn off Jud Harmon's copy of The Clarion, "thet the'r public railroadin' experimint shud be problem enough f'r th' guv'mint up t' Ottawa without them thinkin' o' takin' charge o' th' wheat crop as I sees th' grain growlers in th' west want 'em t' do."

"Great horned toads. How kin th' guv'mint increase th' price o' grain more'n its worth an' more'n world buyers are willin' t' pay f'r et? Ef th' guv'mint sez t' th' growlers 'we'll gar-ran-tee yez $2 or more, an' a share o' th' profits,'—if they's any—who's goin' to make good th' gar-ran-tee if the guv'mint only gits $1.50 a bushel? Why, you an' me an' th' rest o' th' country every wan in which represents $7 to $8 o' th' railway deficit . . . an' more comin' fr'm th' looks o' et. Pshaw," concluded Rufus, "et's about as reason-able t' expect success fr'm guv'mint interference in private business ez et is t' expect Bud here t' give yez th' right change out o' a quarter when ye buy a plug o' toe-baccy fr'm him."

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Grain Elevator Machinery

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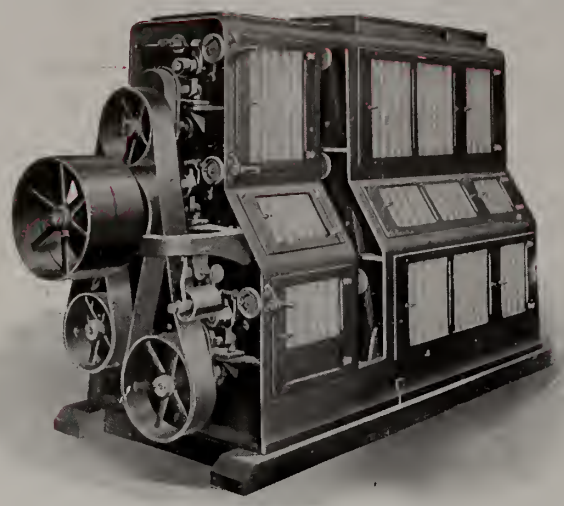
The SUCCESS of the MIDGET MARVEL



POSITIVE DIFFERENTIAL BETWEEN FAST AND SLOW ROLLS.

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PATENTED VIBRATING SCALPER SCREEN under first break

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SMALL AMOUNT OF POWER AND LABOR required to operate

With the use of gears we maintain a constant and positive differential. Experience has taught us that by use of gears ONLY can this positive differential be maintained.

The VIBRATING ADJUSTABLE SCALPER SCREEN under the first break is an essential feature. It is found exclusively in MIDGET MARVEL MILLS. Its use in Canada is absolutely controlled by us through letters patent.

POWERS REQUIRED:—We recommend 10 H.P. for the 25 Barrel, 15 H.P. for the 50 Barrel size, (Many owners are using less. We recommend, however, some reserve power.)

Built entirely within cast iron frames, with planed joints, the MIDGET MARVEL is solid, substantial, rigid, and operates entirely without vibration.

During the past ten years we have constantly improved the MARVEL. A recent improvement is a Disintegrator which is built in and forms a part of the mill. It is applied between the Second Reduction Rolls and Reel. This gives us a 5 per cent. average increase in yield. This feature, also, is exclusively controlled by us through letters patent. An entirely new ventilating system which eliminates excess moisture, heat and dust, is our latest improvement.

The SUCCESS of the MARVEL FLOUR MILL has been proven by ten years of operation and the 2,500 (round numbers) of these mills now running on the North American Continent.

For further information and descriptive literature address:

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Western Office: 1206 Union Trust Building, Winnipeg, Man.

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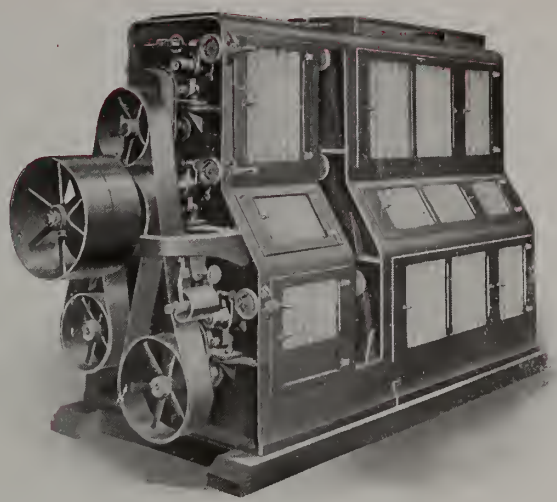
THE YELLOW BOOK

MIDGET MARVEL MILL



DUPLICATE ORDERS

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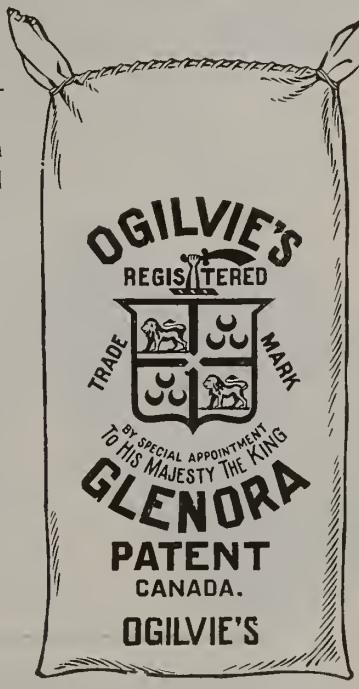

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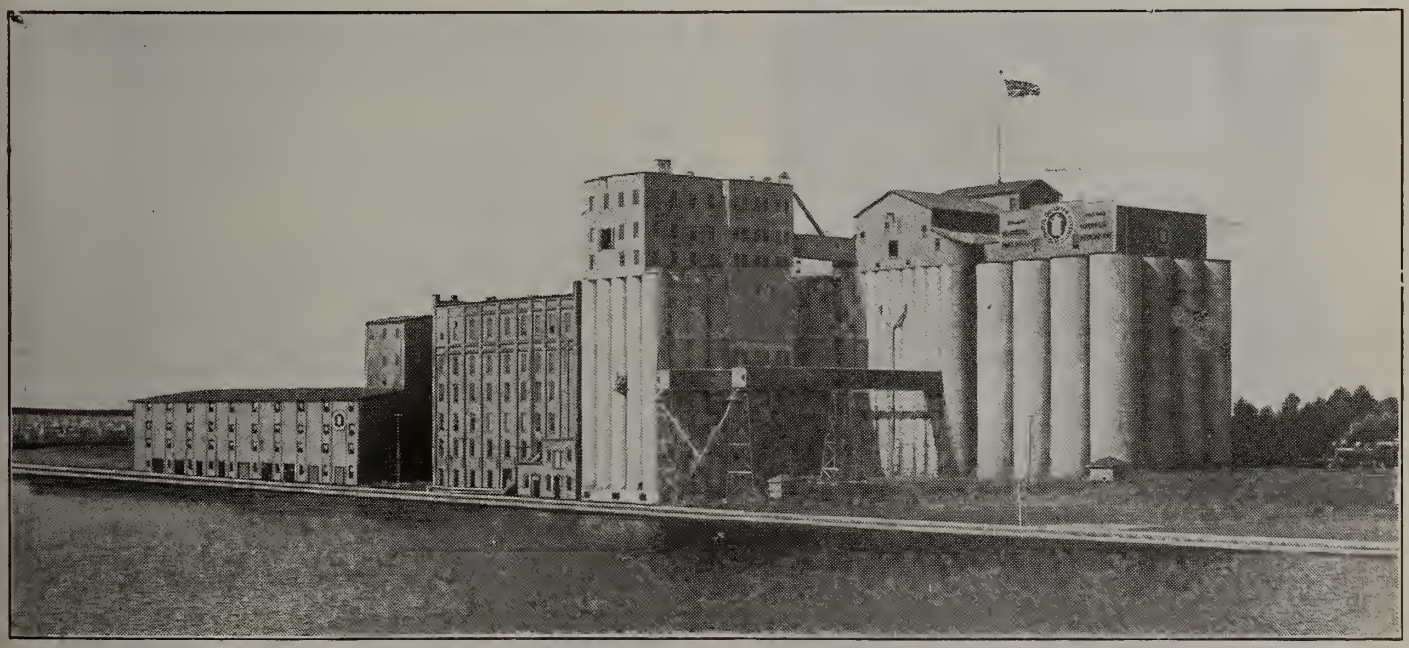

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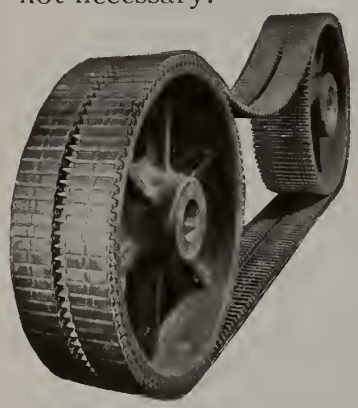

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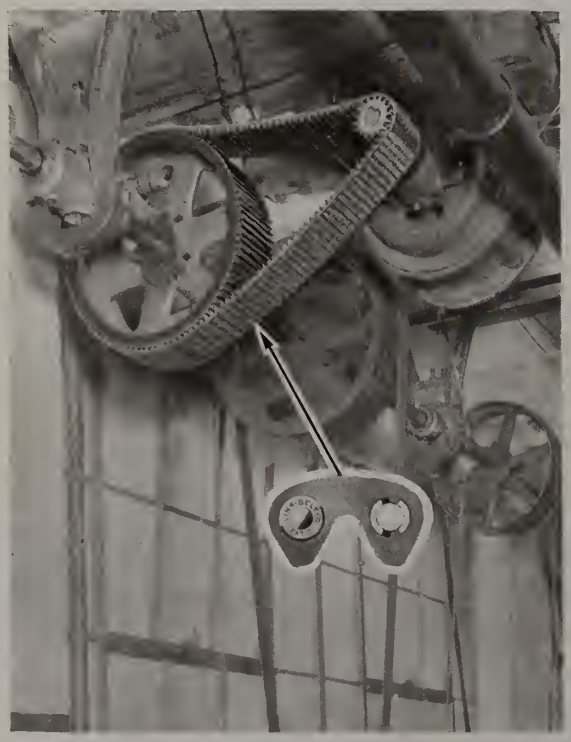

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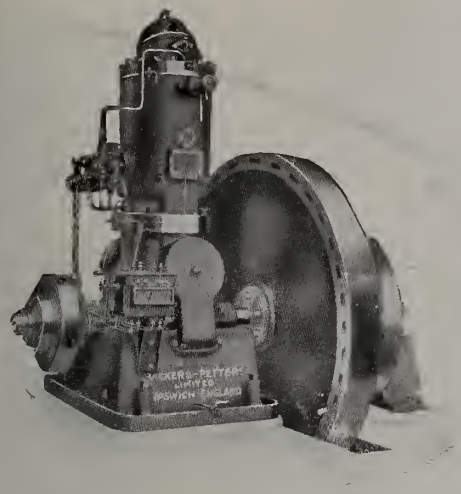

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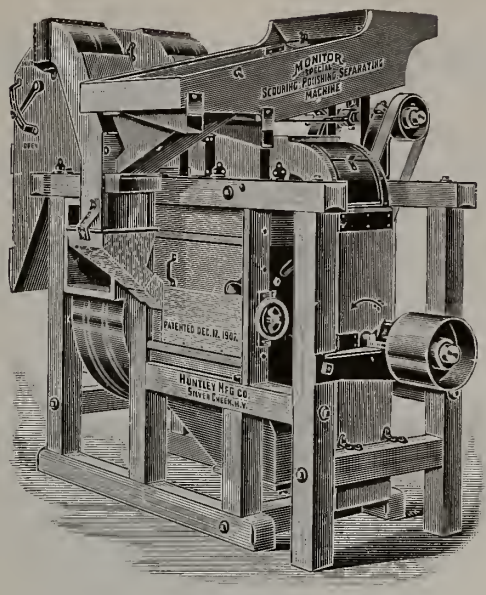

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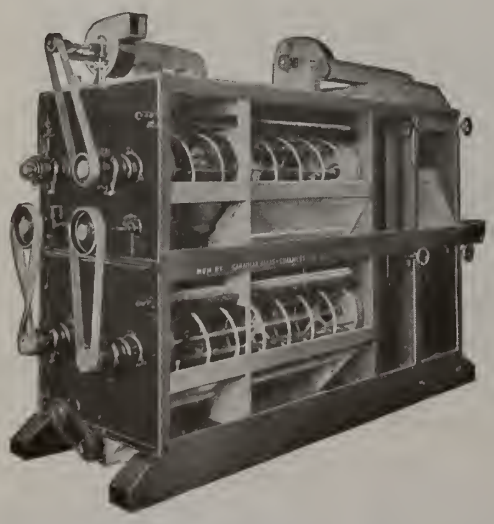

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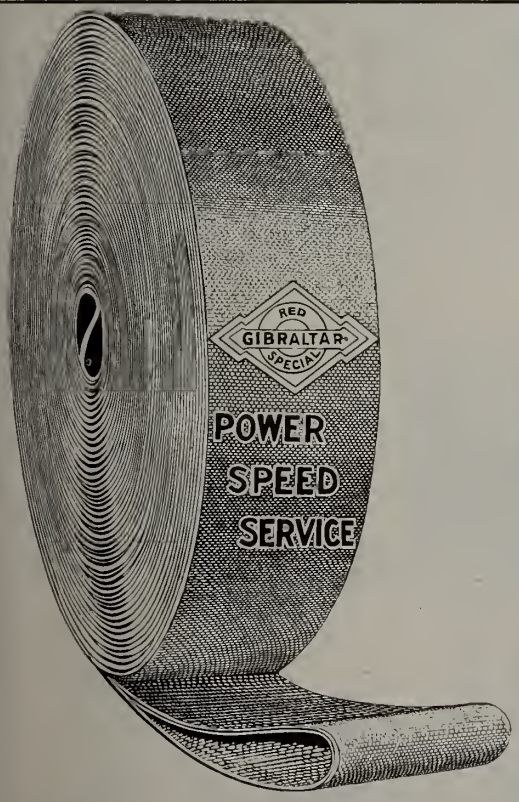

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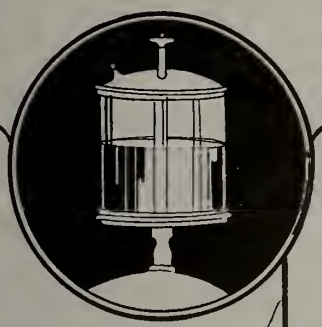

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VOL. III MONTREAL, APRIL 1ST, 1922. No. 5

CANADA'S ONLY MILLING AND GRAIN PAPER

Control Proposals Unwarranted.

THE insistent clamor of the western grain growing interests for the re-establishment of wheat control has been heard at Ottawa and Premier King has promised that the matter will be referred to the agricultural committee of the House of Commons for study and report.

By some extraordinary line of reasoning those who are asking for the re-introduction of state handling of the wheat crop have convinced themselves that it requires but the "magic" of Government control, which has already proved so devastating in other directions, to automatically raise the value of Canada's wheat in the world's markets. They argue that control should be re-introduced and maintained until world conditions become normal but it is evident that they have not stopped to consider that the operation of control which is purely a war-time measure could only hinder not help towards the restoration of those normal conditions which they apparently so desire.

Lacking any advice to the contrary it is assumed that the partisans of control want nothing less than the putting into effect of the enabling legislation which was adopted in 1920 as a species of sop to the western grain growing interests after popular opinion had forced the Borden government to lift control which had been unduly prolonged without the slightest provocation.

The restoration of wheat control along its former lines would mean the entire marketing of the wheat crop by a Government appointed board and the automatic elimination from active business of grain exchanges and the grain handling community, as well as the destruction of the Canadian flour export trade.

This is as close an approach to Bolshevism as anything ever attempted in this country, the Winnipeg labor riots of some time ago not excluded. As Canadian Milling & Grain Journal has previously asked, why should not Parliament, if it submits to the grain growers and grants control, immediately set about nationalizing the country's lumber, fish, mineral, fur and other natural resources?

When legislation which was introduced to enable the government to restore control was under discussion at Ottawa in June, 1920, Premier King, then Leader of the Opposition, stated that he meant to raise a question as to the constitutionality of the wheat board as such a doubt had been mentioned to him.

The Prime Minister can learn very quickly what happened to the flour milling and grain handling interests and of the disruption and disorganization of carefully developed business connections as a result of post-war enforcement of control and it is to be hoped that if the agricultural committee should recommend the rehabilitation control that Hon. Mr. King, bearing in mind fate of the Board of Commerce, will ascertain just what the constitutional standing of a Wheat Board such as proposed would be, before any decisive action towards its re-introduction is taken.

Peace in Industry and Peace in War.

PEACE in its own industrial world is as necessary to any country's well-being as peace in its international relations, and the world, in order to attain an era of complete peace, will have to go back seven years from the present to the time when no work was too hard and no task or sacrifice too heavy to make for the sake of the preservation of their own freedom and the structure of civilization.

Since the armistice there have been many instances of the ruinous cost to the participants of the industrial warfare that followed the great war. An outstanding instance is that of the coal miners in Britain, who not only brought the business of the nation almost to a standstill and shut off the exports of coal, which are one of the main resources of the United Kingdom, but themselves lost forty-five million dollars which they would have otherwise earned.

The international spirit of August, 1914, which brought the allied nations into concerted action without counting the price which had to be paid, and the national spirit of August, 1914, which inspired every man and woman to give their all in life, labor or money for the common cause, needs to be revived in order to solve the difficulties of peace.

A Fair Deal For All.

WHILE it has since the beginning of its existence been the policy of Canadian Milling & Grain Journal to urge the exportation of more flour and less wheat from Canada, efforts which are being made to discriminate between the eastern and western grain routes at the expense of a certain section of the country call for a strong protest.

It is being represented that because of the shorter haul as well as the low loading-point-to-Atlantic coast rate prevailing for grain shipped to Europe from Vancouver via the Panama Canal that a special rate should be made for grain shipments from

Alberta to the head of the lakes so as to encourage western grain shippers to utilize the eastern route.

Why should the Pacific coast be thus discriminated against and thereby deprived of a just proportion of the country's huge grain handling business? Apart from any question of justice the Pacific coast which is but 650 miles from Calgary as against 1,250 miles from Calgary to the head of the lakes possesses the advantages that grain shipped via that route does not have to suffer the rehandling and consequent loss that is met with in the case of grain, which coming by the eastern route not only has to go through elevators at Fort William but is either rehandled at Buffalo or New York or at Port McNicoll or Port Colborne and at Montreal.

In view of the terrific grain congestion at Montreal last season it should be evident, even taking into consideration the expansion of facilities which are under way to prevent its recurrence, that there is plenty of business for every part of the country. If grain rates which are abnormally high everywhere are to be revised any reduction decided upon should in fairness to all be uniform throughout the Dominion.

Incidentally, anything the railways might do while on the subject of rate revision to remove the discrimination existing on export flour as against wheat shipments would receive the unqualified support of the Canadian milling interests and would be a substantial seconding of their efforts to improve their export business.

An English Miller's Lament.

CONSIDERABLE discussion has been created in United Kingdom milling circles as a result of the publication of a letter from an English miller signing himself "Militant", who argues for less importations of foreign flour and increased manufacture of the home product. In some of the views expressed, British millers who use imported flour to mix with their own product and thereby increase their output are being mercilessly criticised and there is talk of the establishment of a flour "pool" to which millers should send their surplus flour and the operation of which it is anticipated would enable the members thereof to make flour prices which would effectually bar the foreign product from the country.

The real crux of the situation appears to be the price of North American wheat—without which English millers cannot manufacture a saleable flour —and which they claim is too high to enable them to compete with foreign flour importations.

We have read "Militant's" letter and have studied his arguments, but we can see not the slightest possibility for the realization of his hope for reduced importations of foreign flour, at least as far as this country is concerned.

In the first place, granted the excellence of their machinery and their milling methods, English millers cannot, without the use of Canadian wheat ever hope to produce flour equal to our exported grades. If they could there would have been no occasion for "Militant's" denunciation of the import situation.

Furthermore, Canadian exporting millers have worked up an export trade with the United Kingdom which they not only expect to keep, but intend to increase by adhering to their three cardinal principles of export business: quality, price and prompt shipment. The Canadian milling industry as a matter of fact is endeavoring right now to secure more equitable rates for export flour as against export wheat shipments with every promise of success. It is of interest to note that even with the prevailing discrimination between flour and wheat shipments in favor of the latter product Canada's exportations of flour to the United Kingdom were nearly one million barrels more in 1921 than in 1913. Incidentally, the United States shipments of flour to the United Kingdom were, last year, approximately one million barrels more than in 1913. How much more cannot Canadian millers hope to improve their export connections not only with the United Kingdom but with other countries when the disabilities with regard to rates and lack of modern handling equipment at seaboard are remedied as they eventually must be?

The possibility of the situation of the English millers being helped by the imposition of an import tax on foreign flour would appear to be hardly worthy of mention in view of an incident which took place in the British House of Commons recently when a member in reply to a question on the subject was informed by a representative of the Chancellor of the Exchequer that the Government had no intention of imposing such a tax.

One on the Pessimists.

TOWARDS the middle of last fall or thereabouts when signs indicated that a decided falling-off in the country's manufacturing activity was imminent there was no lack of amateur and professional prophets to predict the disasters which were to come with the winter. Unemployment was to be everywhere a constant terror, and it was to breed hunger, discontent and violence accompanied by sanguinary scenes. There were to be mobs in the streets of the cities and order was to be maintained if at all, only by force.

The trouble was to be intensified, according to the prophets of gloom, by the necessity for general and widesweeping reductions in abnormally inflated wage schedules. The reductions in many instances have been put into effect but so far as we are aware without any necessity for the reading of the Riot Act in any locality.

The curtailment of industry has nearly, if not quite come up to expectations but it is worthy of note that never in years has there been so little industrial disturbance let alone violence as has been recorded during the past few months. In city after city expected strikes and threatened labor disturbances have quietly been called off, and the semi-revolutionary talk which stirred up so much excitement during the war years and during the period immediately after has sunk into insignificance. The temporary unemployed have been taken care of in one way or another, and while there has unquestionably been an unusual amount of hardship and suffering, the winter has been marked not by loud outcry and violent idleness, but by a general quiet determination which was apparent everywhere to get work and stay at it.

Every miller should watch his costs, so that he may know just what money outlay is represented in his product.

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MONTREAL APRIL 1ST, 1922

THE MONTREAL MARKETS.

Flour.—The flour market for spring wheat grades has been without any new feature to note. The demand from all sources for supplies continues to be very limited and business in consequence has been quiet. The tone of the market has been steady and prices are unchanged with car lots of first patents selling at $8.50, second patents at $8, and strong bakers at $7.80 per barrel in jute bags, ex-track, less 10c per barrel for spot cash.

Winter wheat flour remains very firm, but the volume of business passing on spot has been small. There was some enquiry recently from Toronto firms here for fair sized lots but owing to the limited supplies available no sales were made. Spot prices for car lots were unchanged at $6.75 per barrel, in second-hand jute bags, ex-track, while smaller quantities are quoted at $7 per barrel ex-store, and winter wheat patents at $7.50 to $7.75 per barrel ex-store in new cotton bags. The trade in white corn flour is slow at $5 to $5.10 per barrel in jute bags, delivered.

Millfeed.—The demand for millfeed has been quieter of late, which would indicate that buyers in most cases have filled their wants for the time being. The tone of the market is steady with sales of odd cars of Manitoba bran being made at $32.50, shorts at $33 per ton, including bags, ex-track, while smaller quantities of bran in mixed car orders are quoted at $28.25, shorts at $30.25, and middlings at $32.25 per ton, including bags, less 25c per ton for spot cash, and pure barley meal is quoted at $38 to $40, pure grain moullie at $38, and feed cornmeal at $35 per ton, including bags, delivered. The trade in standard grades of rolled oats is quiet at $3 per bag of 90 lbs.

Grains.—The export trade in all lines of grain here is quiet, there being practically no demand from foreign buyers for supplies which is attributed to some extent to the continued large world's shipments of wheat and the liberal quantities of distressed grain arriving at United Kingdom ports coupled with the very unsettled conditions of the markets on this side of late. A private cable received from Germany recently stated that the German Government was a heavy buyer, of American new crop winter wheat for July-August shipment or later. New York wired recently that sales of 250,000 bushels of wheat; 200,000 bushels corn, and 32,000 bushels of rye had been sold in that market for export account lately.

Baled Hay.—A fair amount of business continues to be done in baled hay for the season of the year and as supplies are ample to meet all requirements the tone of the market is steady with sales of car lots of good No. 1 timothy being recorded at $28 to $29, No. 3 timothy at $26 to $27, and, clover and clover mixed hay at $24 to $2 per ton, ex-track.

MONTREAL GRAIN MEN VIEW POSSIBLE RESUMPTION OF CONTROL WITH MISGIVING

A considerable amount of speculation exists among local grain brokers as to the form which the proposed Government wheat pool now being considered in Ottawa might take. Local grain brokers are of the opinion that if a Government wheat pool such as was in existence during the years of the war were to be introduced in Canada it would spell disaster to the grain trade of the Dominion. They contend that such a pool would not be feasible and would only result in the Government losing a very large amount of money.

There are 133 grain brokers in Montreal who belong to the Corn Exchange which is the largest affiliation of the Board of Trade. These grain brokers do most of their business in buying and selling wheat; a smaller proportion of it consists in the buying and selling of corn, oats and barley; a still smaller proportion of it is done in shipping United States wheat from Canadian ports.

Would Have to Quit.

If a compulsory wheat pool is introduced similar to the one which was in existence during the war, it is argued many of these brokers would be forced to give up business altogether and the local wheat market would be compelled to close. Many of these brokers might be able to continue to do business on a very much reduced scale in corn, oats and barley and United States wheat. Last year a good business was done by local brokers in the shipping of United States wheat through Canadian seaports on account of the difference in exchange which made it more profitable very often for American shippers to take advantage of, than to send the grain via American ports. This advantage will not be so great during the coming year on account of the stabilizing of the exchange rates.

Although there is little information to judge from as to what form the proposed wheat pool will actually take local brokers are inclined to think that the pool would be a voluntary one in which farmers got together and obtained the services of the Government to sell their wheat so that the profits of the middleman would be eliminated. This would also lower the prices when receipts were heavy. If this sort of pool is introduced it is anticipated that there will still be a certain number of farmers who will not come into the pool and that a small proportion of open trade will still be carried on.

During the war years many local wheat brokers sold wheat on a straight commission basis, which meant that they had a small but steady income. Whether this would be continued if the proposed scheme were introduced is too far off to warrant conjectures.

JAPANESE VESSELS TAKING LARGE SHARE OF GRAIN CARRYING TRADE.

St. John, N.B.—Coincident with the large increase in grain shipments from Portland recently is the large increase in the amount of grain to be carried away by Japanese vessels. More grain is reported to have cleared from Portland in Japanese bottoms of late than in the vessels of all other countries combined. A Portland vessel agent says that glancing at the recent list of grain carriers clearing

from Portland, was like looking at a Japanese dictionary.

American shipowners are not the only ones to view the situation with alarm. The Norwegian, Swedish and British owners, who frequently shade the prices established by the U. S. Shipping Board vessels, say they cannot meet the prices established by the Japanese companies. It was only recently that three Japanese vessels came all the way across the Pacific in ballast to load wheat and flour at Portland for the Orient.

WHEAT FLOUR EXPORTS INCREASING.

Montreal.—Records of Canada's wheat and flour export business for the month of February last and the six months of the crop year to the end of the same month, affords some interesting comparisons. The report, which is officially compiled for the Government, shows that for the six months just ended exports of wheat from this country amount to 103,727,326 bushels as compared with 101,967,991 bushels a year ago, while during February exports were only 5,602,295 bushels compared with 9,181,180 bushels a year ago.

On the other hand February's wheat flour exports are slightly higher, amounting to 665,111 bushels as compared with 622,730 a year ago, and for the six months they were 3,920,520 barrels as against 3,558,518 barrels in the same period a year ago. This indicates that the export trade in flour continues brisk, as against a current falling off in export trade in natural wheat.

In view of the activity reported at this juncture, in the Canadian flour milling industry, the above is interesting to note. The six months figures indicate that shipments to the United Kingdom this year are at a considerable increase over a year ago, there having been shipped of the total exports, only 347,156 barrels to the United States as compared with 905,924 barrels last year over the similar period.

C. P. R. GRAIN BUSINESS AT ST. JOHN, N.B.

St. John, N.B.—During February last the Canadian Pacific Railway delivered to ocean liners here 3,700,000 bushels of grain, compared with 1,154,000 bushels during the corresponding month in 1921. There has been as much handled so far this season as there was up to April 5 last year. The total delivered this season amounts to 8,240,000 bushels.

FREIGHT RATES ON SEEDS REDUCED.

Quebec.—The Department of Agriculture has secured from the Canadian Pacific, Grand Trunk and Canadian National Railways a very important reduction in the freight rates on wheat, oats, barley, rye and corn for seeding, in carloads or less than carloads, for the benefit of farmers of the province. The reduction became effective March 24, and is to remain in force until May 15, 1922.

This reduction varies according to destination. It is granted between all stations in the province of Quebec and only on the lines of railways above mentioned.

The favored tariff applies only to farmers, agricultural societies, farmers' clubs, co-operative agricultural societies and municipalities.

QUOTATIONS ON BRAN AND SHORTS.

The following nominal quotations on bran and shorts have been reported by the Canadian National Millers' Association, Coristine Building, Montreal, to the United States Customs Authorities as the prices of these commodities now in effect. These prices are the net cash prices in bulk, f.o.b., the mill:

	Bran.	Shorts.
Montreal	$25.50	$27.50
Toronto	25.50	27.50
Port Colborne	21.00	23.00
Fort William	19.00	21.00
Keewatin	18.50	20.50
Winnipeg	18.00	20.00
Moose Jaw	14.00	16.00
Calgary	9.50	10.50

WATER POWER PLANTS AND ICE TROUBLE.

Toronto.—In northern localities ice is a more formidable trouble for water power plants to cope with than further south where low temperatures do not prevail for so long a time. During the past winter experiments have been made on a rather large scale in Canada to determine just what is the best method of coping with ice. One plan is to keep everything about the plant, including dam, gates, etc., at a fraction of a degree above the freezing point, to prevent ice forming or adhering. Another plan, but not new, that of heating the water in the immediate vicinity of the exposed parts of the plant, is being tested out by the Ontario Hydro-Electric Commission. Data respecting both these plans should be interesting for water power users when published.

THE WESTERN MARKETS

The following report furnished by Messrs Baird and Botterell, 103 Grain Exchange, Winnipeg, shows daily highest price levels from March 14, 1922, to March 27, 1922, inclusive.

	Mar. 14	Mar. 15	Mar. 16	Mar. 17	Mar. 18	Mar. 20	Mar. 21	Mar. 22	Mar. 23	Mar. 24	Mar. 25	Mar. 27
May Wheat	1.33 7/8	1.32 1/2	1.35 1/2	1.38 3/4	1.40 1/4	1.38 1/2	1.38	1.37 3/4	1.38	1.35 1/2	1.35 5/8	1.34 3/4
July Wheat	1.29 1/4	1.28 1/8	1.31 5/8	1.35 1/2	1.37	1.35 3/8	1.35 1/2	1.35 1/8	1.35	1.32 3/4	1.31 1/4	1.33 1/8
May Flax	2.34 1/4	2.31 3/4	2.33 5/8	2.38 1/4	2.39 1/8	2.38	2.36 1/2	2.30 1/2	2.33 1/2	2.31 3/4	2.30 1/2	2.31
July Flax	2.33 3/8	2.30	2.32	2.36 5/8	2.37 7/8	2.36	2.33	2.30 1/2	2.30 3/4	2.30 1/8	2.29	2.29 1/8
May Rye	1.04	1.02 3/4	1.04 5/8	1.07 1/2	1.07	1.06	1.04 7/8	1.04 1/2	1.02 3/4	1.02 1/4	1.02	1.02 3/4
July Rye	0.99	0.97 1/2	0.96 1/2	1.02 1/2	1.01 1/2	1.00 1/2	1.00	0.99 1/2	0.98	0.97 1/4	0.98	0.97 1/4
May Barley	0.63 1/2	0.65 1/2	0.65 3/4	0.67	0.67	0.66 1/2	0.66 1/8	0.67	0.66 1/8	0.66 3/8	0.66	0.66 3/8
July Barley	0.63 1/8	0.63 1/8	0.62 1/2	0.64 3/8	0.64 3/8	0.64 1/2	0.64	0.64 5/8	0.63 1/4	0.64 1/4	0.63 3/4	0.63 3/4
May Oats	0.48 1/8	0.47 7/8	0.45 3/8	0.49 1/2	0.49 3/4	0.48 7/8	0.48 5/8	0.48 1/2	0.48 5/8	0.48	0.47 3/4	0.47 1/8
July Oats	0.48	0.47 3/8	0.47 7/8	0.49	0.48 1/2	0.48 1/2	0.48 1/4	0.48 1/8	0.47 7/8	0.47 1/2	0.47 5/8	0.47 1/2

ONTARIO

TORONTO

TORONTO APRIL 1ST, 1922

THE TORONTO MARKETS.

Flour.—Very little business is passing in either export or domestic flour at the present time, and traders are complaining of dullness in the market. In the export field buyers and sellers are apart to the extent of one to two shillings a sack. Manitoba flour is quoted at 45 shillings and six pence, United Kingdom ports, but there is practically no demand. The domestic market is equally quiet and buying is still from the hand to mouth variety with no price changes. Ontario winter wheat flour is too high for export and the domestic market is paying $6.25 for it, Toronto and Montreal.

Millfeeds.—The demand for bran continues but the season is now approaching when grass will largely take the place of this feed. The call for shorts has been a little heavier during the past ten days and a fairly satisfactory amount of business is being done. There is a good demand for white middlings and feed flour although on the whole the market for feeds is a little less keen than it has been for some weeks. The high prices and scarcity of ready cash, coupled with the impassable condition of many of the country roads have combined to bring about this condition. There has been a fair amount of business in straight cars. Bran is quoted at $28.00, shorts $30,00, white middlings $35.00 to $36.00, and feed flour at $1.90. There is no surplus of millfeeds in the country and dealers have been cleaning up the heavier purchases of a few weeks ago.

Rolled Oats.—Some lots of meal have been sold for export but as a rule dealers refuse to pay the price asked. The market is considered still to be a couple of shillings too high, but some dealers have put through some business in order to again get their brands on the market, although there has been no money in the business. Rolled oats are quoted at $3.10 to $3.15 per ninety-pound sack on the domestic market.

Grain.—Holders of Ontario wheat have not revised their ideas in sympathy with the decline in Western wheat prices and as a result it is difficult for buyer and seller to get together. It is on record that No. 1 commercial was offered recently at $1.40 delivered, Toronto, but the prospective buyer could not see his way clear to make the purchase. Trade in the coarse Ontario grains lacks the force it had a couple of weeks ago, due in part to the fact that immediate requirements have been largely filled, and in part to the tendency to stay out of the market when prices are declining. Towards the end of last month local millers were reported to be buying wheat in only fair quantities while there also appeared to be some speculation for the rise going on. A feeling existed among many traders that the market is in for another advance. Others were none too confident and expected the market to fluctuate.

Oil Meal.—The market for oil meal is somewhat easier, although the export demand, which had slackened off somewhat, has picked up again slightly. The prevailing quotations range from $58.00 to $60.00, delivered Ontario points.

Seeds.—Selling prices of best quality Government graded recleaned seeds are nominally quoted as follows: Alsike, per cwt., $20.00; red clover, $20.00; red clover, late mammoth, $31.00; sweet clover, $9.00; timothy, $11.00; alfalfa, Ont., $31.00.

PLENTY OF SEED OATS AVAILABLE.

Ottawa.—The unfortunate crop conditions in 1921 in many parts of Canada, more especially for oats, led the seed purchasing commission of the seed branch here to hold in reserve considerably more than half a million bushels of No. 1 seed oats for this spring's seeding, according to a statement issued by the Department of Agriculture. This grain was stored in Government elevators in Calgary and Saskatoon. Early in March about 400,000 bushels of this grain had been disposed of, a considerable proportion of it going to Ontario, Quebec and other eastern provinces. The seed purchasing commission supplies seed oats in carloads only, and at the net cost of the re-cleaned seeds. It is understood that during recent months bankers and others have persisted in encouraging merchants to be cautious. Reports indicate that seed merchants have been so guided by these precautions as to have in many cases an insufficient supply of seed grain to meet the full requirements.

PROVIDE FUNDS FOR GRAIN PROBE.

Ottawa.—That it is the intention of the Government to provide for continuance of the western grain trade inquiry is evident from an item in the estimates of the Trade and Commerce Department tabled in the House recently. The item provides $40,000 "for salaries and expenses of the Grain inquiry commission."

The sittings of the commission appointed last year under the chairmanship of Mr. Justice Hyndman were discontinued when the Manitoba Supreme Court issued an injunction against them.

Since that time, however, there have been recommendations that the commission should be reconstituted, and a thorough inquiry of the western grain marketing situation carried out.

INDIA'S 1922 WHEAT ACREAGE.

Ottawa.—The area sown to wheat in British India is placed at 28,403,000 acres in the second annual forecast cabled to the Department of Agriculture by the Department of Statistics, British India. This is 20 per cent. more than was shown in the corresponding estimate for last year, when 23,563,000 acres was estimated, and 5 per cent. less than the corresponding five years, 1915-16 to 1919-20 average of 30,072,000 acres.

The final estimate of the area for last year as given August 10, 1921, was 25,722,000 acres, and that of the five year average, 30,499,000 acres.

Toronto.—Mr. Walter J. Whalen, a miller employed at Messrs. Adam Brown & Sons, Grist Mill at Owen Sound, had his arm torn off when it became caught in a revolving shaft while at work in the mill recently. Although conscious when picked up he expired later. Mr. Whalen had been in the employ of the company for the past six years, was married, and was about 26 years of age.

REQUEST FOR CONTROL BOARD GOES TO AGRICULTURAL COMMITTEE.

Ottawa.—The request of a delegation from the Canadian council of agriculture for the re-establishment of the Canadian wheat board will be referred to the agricultural committee of the house of commons for consideration and report. During a recent conference between the Prime Minister, members of his cabinet and representatives of those who are agitating for control of some sort, the absolute necessity for re-establishing the board was stressed by the delegates, who insisted that the need for it was imperative if the western farmers were to be saved. Mr. J. A. Maharg informed the premier and members of the cabinet present, Hon. Charles Stewart, minister of the interior, Hon. J. A. Robb, minister of trade and commerce, and Hon. W. R. Motherwell, minister of agriculture, the acreage sown in Saskatchewan this year would be reduced unless the farmers were assured that the board would be re-established. Unless the wheat board was re-established, provincial governments of the west might have to take drastic action to protect the farmers.

Government Shy of Compulsion.

From questions put by Messrs. Motherwell and Stewart, it appeared clear that the government is not satisfied that the establishment of a compulsory wheat board would be the best method to deal with the situation. Mr. Stewart emphasized the fact that it was the compulsory feature of the matter which was causing the government a great deal of thought. "I'll be very frank in saying that I am not much in favor of compulsion," said the minister of interior at one point.

Even though the agricultural committee should report in favor of some system of control it is not believed that such could be legislated into effect in time to affect this year's crop.

CANADIAN CEREAL COMPANY'S FLOUR MILL AT GALT, ONT., HAS CHANGED HANDS.

Toronto.—The Canadian Cereal Company's flour mill at Galt, Ont., has been taken over by a new company, which, when the charter is isued, shortly will be known as the Galt Flour Mills Company, Limited. The mill has already started operations. The capacity of the mill has been increased to 700 barrels per day and will be devoted to turning out the company's brands, chief of which are "Rainbow," "Goldie's Star," "Echo" and "White Dove." The officers of the company are: President, Mr. F. W. Hay; Vice-President, Mr. John Kennedy; Secretary-Treasurer, Mr. R. C. Pratt; Director, Mr. J. W. Cornish.

The Modern Sophocles

The test of life is living. The test of worth is service. He who serves himself and no other, is a failure, though death releases his grasp on the ransom of an empire. He who finds life bitter is a failure, though multitudes cheer him on the street. The king who rules an unhappy and maltreated people is a failure. The carpenter who hangs a door well is a success. There is more honor in using one talent well than in abusing the possession of ten.

To keep clean, to do good work, to earn friends, to be happy and bestow happiness, to develop opportunity, to serve where possible and learn not to whine—this is success. There is no greater; there is no other.

Legal Notes

Regina.—Legal opinion has been secured by directors of the Saskatchewan Grain Growers' Association to the effect that re-establishment of the Canada Wheat Board would be ultra vires.

Toronto. — That findings of fact by the Dominion Board of Grain Commissioners are not binding on provincial courts, was the decision of Justice Middleton announced in a judgment recently in an action brought by Messrs. Quintal and Lynch, grain and hay merchants, of Montreal, against the Goderich Elevator and Transit Company, Ltd.

The action was to recover $5,000 damages for deterioration of 34,000 bushels of oats, while in storage at Goderich. Justice Middleton found that the deterioration did not take place in the elevator at Goderich, but on the railway cars during shipment from Goderich to Montreal. Some of the 18 cars complained of were 48 days in transit between the two points. The action was consequently dismissed.

It was argued at the trial that the findings of the grain commissioners were binding. The commissioners held that the elevator company was responsible.

Toronto.—A meeting of Ontario millers with the freight committee of the Dominion Millers' Association and of the freight committee of the National Association was held in Toronto recently, when the matter of freight rates and other matters pertaining to the milling industry were talked over. A series of similar conferences has been held lately and will continue to be held for the discussion of various matters.

WE WANT **YOUR** NAME

To be listed in the Free Milling Directory of Canadian Flour Mills, managers, superintendents, head and second millers, and engineers.

IF YOU WANT TO BE INCLUDED

We must have your name and other particulars on accompanying form. Kindly fill in and return promptly.

Superintendent .....

Head Miller .....

Second Miller .....

Name of Firm .....

Address .....

Daily Capacity .....

Power Used .....

WESTERN PROVINCES

WINNIPEG

WINNIPEG APRIL 1ST. 1922

THE WINNIPEG MARKETS.

Flour.—There is no marked change in conditions in the flour market here and while western domestic demand continues good, the export branch of the trade appears to have become quiet again. Mills appear to be fairly busy, running about 75 per cent. capacity, filling orders now on hand, which is purely western Canadian business, as overseas buyers have temporarily left the market owing to the recent weakness in wheat prices. Prices remain unchanged from previous report as the millers have not attempted to follow the sharp reactions almost daily in the wheat market. Present prices are as follows: top patent spring wheat flour, $8 bbl., seconds $7.40, first clears $6.80, jute, mixed cars, 30-day terms, delivered at any point between Fort William and the western boundary of Manitoba. In 98-lb. cotton bags, prices are 20c bbl. over the jute basis. Saskatchewan points take 10c under these prices, and from eastern Alberta to the Pacific Coast values rise progressively to $8.30 for top patents at Vancouver and like points. Vancouver Island takes $8.35 for top patents, and Prince Rupert $8.50.

Millfeed.—The demand for millfeed is very keen at present all over the prairies and millers have difficulty in supplying the needs of dairymen and farmers. Prices are holding firm, showing little change from last report, present prices being: bran $22.00 ton, shorts $24.00, in bags, delivered, Winnipeg basis.

Oatmeal.—The demand for rolled oats and oatmeal continues quiet. Exporting trade remains at a low ebb and domestic trade is only fair. Prices remain unchanged as follows: Rolled oats, in 80-lb. cotton bags, $2.50 to $2.60; oatmeal, in 98-lb. cotton bags, $3.00 to $3.20, delivered, Winnipeg territory.

Rye Products.—Trade generally is quiet with only a limited demand. Many enquiries are received by the local mills, but prices appear too high for a large volume of business. Prices for all grades are the same as last reported. Best patent flour is selling at $7.50 bbl., in 98-lb, bags; medium $6.50; dark $5.00; rye meal $5.00, delivered Winnipeg territory.

Linseed Products.—The demand for oil cake and meal has materially fallen off since last report, and the local mills report business very quiet. Owing to the firm and high prices of flax seed in this and American markets, foreign seed appears to be offering keen competition to existing values on this side. Present prices asked are: meal $52.00 and cake $50.00 ton, in bags, mill points. Raw oil is quoted at $1.15 and boiled oil at $1.18 per gallon.

Flaxseed.—The market continues firm to strong with some fluctuation, but with a generally firm tone; statistical position remains strong, and some authorities are taking a decidedly pessimistic view of the situation.

In a recent report, the statement was made by a leading statistician on flax conditions that, during 1921, Argentine shipped 54,769,000 bus. of flaxseed, of which 44,064,000 bus. went to Europe and 10,705,000 bus. to the United States, the Argentine government places the surplus for 1922 at 26,200,000 bus., which is less than half last year's shipments.

For several years back, the United States crop has averaged considerably less than ten million bushels, and Canada also had a small crop with probably not two million bushels available for shipment to the United States; Europe took all of the small Indian surplus, and, although, this year, India may produce several times last year's crop, it will take considerably more to make up for the shortage in America.

THE GRAIN MARKET.

The wheat market recently has shown anything but stability, the trend of values has been erratic, showing a difference of 8c to 10c, with the trade generally up in the air and much divided in their opinions as to the real value of wheat at the present time. The general trend of values since March 8, the date upon which the last report was written, has been downward. On this day May wheat closed at $1.40⅜, and on March 21, the May future closed at $1.35⅜, and on the 15th was down to $1.32. The July future has made gains on the nearby position, as early in the month July was trading at a discount under May of about 7c. Just now the spread is 2⅜c. This indicates there has been better buying in the more distant month, and it is undoubtedly true that what wheat the foreigner is buying now is for later shipments. The bullish advances made in February, which promised so well, have spent their force and the market is again dominated by a bearish tone. Big interests with large holdings of wheat, which they secured all the way up on the advance, have now unloaded these lines and this liquidation was responsible for the break of about 15c. Foreign cables have been disappointing and out of line with values on this side, making new business impossible.

Oats.—The undertone to this market has been steady with prices working within a narrow range, and little change in values has taken place from last report. Stocks are liberal at Lower Lake Ports and are available for domestic or export channels, but are meeting a very ordinary demand, in fact the demand for these stocks is quite discouraging to owners who have carried them since the close of navigation. Stocks at terminals will also be heav around opening of navigation.

Barley.—Market has continued dull and featureless.

INTEREST DUE BY GREECE UNPAID.

Winnipeg.—The efforts of the British government to secure for the Canadian government payment of interest on the trade credit granted by the Dominion two years ago to the Greek government in order that the Greeks might buy Canadian wheat, has not so far met with success. The grain men were paid for 4,000,000 bushels of wheat bought, but the government of Canada, which advanced the money, has so far not even had the interest payment.

The Greek government owes to Canada the principal and interest on $8,000,000, while Roumania owes both principal and interest on $20,000,000. Both credits are repayable in 1924.

SAYS MUCH GRAIN IS GOING TO GREAT BRITAIN VIA PANAMA CANAL.

Vancouver.—Flat denial is given the contention of eastern elevator interests by Mr. L. S. Carr, Calgary representative of the Vancouver Milling & Grain Co., Ltd. as to quantity of wheat going to the United Kingdom via Vancouver and Panama canal routes. A newspaper dispatch recently stated that practically all wheat this season shipped from Vancouver has gone to the Orient.

"Such a statement is ridiculous," said Mr. Carr "absolutely incorrect; it is merely propaganda intended to hit the new route. Naturally, elevator people at the head of the lakes are beginning to become somewhat alarmed at the flow of traffic via the Pacific coast and are out to bolster up the old route to the east in every possible way.

Orient Trade Not Permanent.

"As a matter of fact," said Mr. Carr, "about two and one half million bushels of wheat have this season been booked for shipment from Vancouver to the United Kingdom, and there is every indication that next season bookings will be about fifty per cent more than this."

Mr. Carr stated about 2,800,000 bushels of wheat had been booked for the Orient, but it was a very moot point whether there would be any degree of permanency in that particular business.

Helps to Move Crops.

"Any shipment of grain from the province of Alberta made during the annual grain rush for export via Vancouver is a help rather than a detriment to the head of the lakes," stated a local grain official when asked if the routing of export grain from Calgary to the Pacific coast during the heavy grain transportation months, would be in any way harmful to the two cities as grain shipping and storage centers.

FLOUR EXPORTS FROM PACIFIC COAST.

Vancouver.—During the month of February last the following shipments of flour were made from this port: Via S.S. Panama on Feb. 1, for the United Kingdom, 3,500, 140-pound sacks; via S.S. Empress of Asia on February 2, for Hong Kong, 57,081 49-pound sacks; via S.S. Arizonan on February 15, for the United Kingdom 5,000 140-pound sacks, and via S.S. Narenta on February 17, for the United Kingdom 5,330 140-pound sacks.

The S.S. Panama also carried 80,266 bushels of wheat for the United Kingdom.

TRADE OPPORTUNITIES

With a view to assisting the Canadian milling trade in the development of a permanent and profitable export business, "Canadian Milling & Grain Journal" publishes in each issue a selected list of trade opportunities, the investigation of which should prove of value. "Canadian Milling & Grain Journal" is taking special pains to ascertain the reliability of each opportunity presented and will gladly furnish any further information regarding them that may be desired.

THE EDITOR.

No. 241.—Messrs. E. Lloyd & Company, Balfour House, 119-125 Finsbury Pavement, London, E. C. 2, would like to get in touch with Canadian exporters of goods saleable in the United Kingdom, with a view to acting as their representatives or selling agents.

No. 242.—Messrs. W. R. Loxly & Company, 34 Lime Street, London, who have branches in the Far East, are in a position to act as the representatives, on a small commission, for reliable Canadian houses desirous of having a buying and selling agent in the United Kingdom market and for the export trade handled through London.

No. 243.—Messrs. Isaac Modiano Bros. & Son, 5 Rangoon Street, Crutched Friars, London, E. C. 3, who have strong connections in Salonika and Constantinople, are prepared to handle an agency for the Near East for any Canadian line suitable for these markets.

No. 244.—Messrs. McKinley & Livarwick, 6 South Street, Finsbury, London, E. C. 2, who have offices at Malaga, Spain, are open to represent Canadian lines in that market.

No. 245.—Messrs. H. J. Stockton & Company, Limited, 16 Philpot Lane, London, E. C. 3, who have trade connections in Shanghai, are open to act as representatives of Canadian exporters in China.

EMBARGO PLACED ON GRAIN TO PACIFIC.

Calgary.—An embargo has been placed on all shipments of grain to the Pacific Coast. This has been rendered necessary owing to the large accumulation of wheat that has been in transit now for a considerable time and which is causing a congestion at Vancouver.

THE CHICAGO MARKET

The following table compiled from figures furnished by Messrs. Logan & Bryan, members of the Winnipeg Grain Exchange and the Chicago Board of Trade, C.P.R. Telegraph Chambers, Montreal, show highest price levels recorded on Chicago Board of Trade from March 14 1922, to March 27, 1922, inclusive.

	Mar. 14	Mar. 15	Mar. 16	Mar. 17	Mar. 18	Mar. 20	Mar. 21	Mar. 22	Mar. 23	Mar. 24	Mar. 25	Mar. 27
May Wheat	1.34½	1.32⅞	1.35⅝	1.39⅝	1.39¾	1.39⅛	1.38	1.36⅞	1.36¼	1.33½	1.32⅜	1.33⅛
July Wheat	1.16¼	1.15	1.16⅞	1.21⅛	1.21⅜	1.21⅜	1.20⅞	1.20⅜	1.19¼	1.18½	1.17⅝	1.18¾
May Corn	0.61½	0.61	0.61½	0.62	0.62⅝	0.62	0.61⅝	0.61⅜	0.60⅞	0.59⅞	0.59⅛	0.58⅞
July Corn	0.64¼	0.62⅜	0.64½	0.65⅝	0.65½	0.64⅝	0.64⅜	0.64⅛	0.63⅝	0.63¾	0.62	0.62¼
May Oats	0.38½	0.38⅛	0.38⅜	0.39¼	0.39⅛	0.38⅝	0.38⅜	0.38⅛	0.38	0.37¼	0.37	0.37
July Oats	0.40⅛	0.40	0.40⅜	0.41¼	0.41¼	0.40⅝	0.40⅝	0.40¼	0.40	0.39¼	0.39	0.39⅛
May Barley	0.64	0.63	0.63	0.64	0.64	0.64½	0.66½	0.66	0.66	0.66⅛	0.66	0.66¼
May Rye	1.01¾	1.02½	1.01¾	1.07	1.07	1.07	1.06	1.05	1.05	1.03	1.02⅞	1.03¾
July Rye	0.91⅜	0.92	0.94⅓	0.97¼	0.97¼	0.98	0.97½	0.96¾	0.96½	0.94	0.93⅞	0.94¼

Foreign Flour and Grain News

A better feeling is growing among shareholders of the milling companies, and the securities have become firmer and several marked advances have been registered. This is due mainly to an improvement in the current demand for flour. Latest figures available show exports for the nine months ending December 31, 1921, to have been 5,130,900 barrels, compared with 3,869,931 for the corresponding period in 1921. The previous year, however, the exports excelled 8,000,000 barrels. Owing to the drop in the price of flour, however, the value of the exports for the nine months of 1921 amounted to only $39,000,000 compared with $46,000,000 for the corresponding period of 1920. For the month of December itself the exports amounted to 747,000 barrels as against 607,000 in December of 1920. The United Kingdom continues to be Canada's best customer with 3,837,000 barrels for the nine months against 1,532,000 in the previous year. For the month of December alone Great Britain took 477,000 barrels against 256,000 in December of the previous year.

The wheat situation at the present time appears to have broadened out into a world proposition in which the local cash supply and demand in the usual centres has little or no effect. The supplies in the various "visibles" are still above what they were last year and the most recent reports from both the Argentine and Australia indicate that there are fair quantities to be marketed from those countries, while India is coming along with a crop. In spite of all these things, however, the European markets continue to show persistent buying on a sharply rising market, which can only be explained by the supposition that the consumer is getting alarmed over the possibility of a curtailment of supplies before the new crops in the northern hemisphere have time to mature.

ROUMANIA.—Latest reports state that a thaw has set in. The snow is still lying over a foot thick on the fields, but the sun is becoming increasingly powerful. The new Liberal Government has issued a statement to the effect that the quantity of wheat still remaining in the country does not exceed 275,000 quarters. Roumanian traders are absolutely unable to understand or give credence to this figure falling, as it does, so far below the country's own requirements, and in no way coinciding with previous estimates of existing stocks. Commenting on the growing crop, official observers state that even should the most favorable weather conditions be experienced, a good wheat harvest could not be obtained.

ARGENTINA.—Fine weather has prevailed recently. Private reports have been circulated on American markets to the effect that the present exportable surplus of wheat in Argentina does not exceed 14,000,000 quarters. The recent drought and swarms of locusts have damaged the maize crop in Santa Fe and Cordoba.

AUSTRALIA.—The yield of wheat in 1921-22 is reported by the International Institute of Agriculture to be 17,020,000 quarters, compared with 18,050,000 in 1920-21 and 14,000,000 the average of the preceding five years.

FRANCE.—The milder weather conditions which have prevailed are favoring the growth of the winter crops. Spring sowing has commenced in the earliest districts of the South, and will become general within the course of the next few weeks. Hopes are entertaind that the acreage sown to spring wheat will completely offset the deficiency in the winter acreage.

NORWAY.—At the recent opening of the Storthing, the King announced that the Government would submit bills for the establishment of a state monopoly on the importation of cereals and flour.

SPAIN.—Recent rains have been very beneficial to the crops, and farmers are well satisfied with the outlook.

AUSTRIA.—Frosty weather is reported, but as the fields are covered with snow no fear is entertained for the safety of the young plants.

GERMANY.—As Germany is obliged to buy foreign wheat, the price of native grain has advanced in sympathy with foreign prices, although the native is still much lower than the foreign article, being quoted 10,000 marks per ton, compared with 12,000 marks for foreign wheat. Leipzig reports there is no doubt that Germany will have to import large quantities of bread-grain in the near future as there is a shortage of supplies, especially in western and southern parts of the country. The rye market advanced in unison with wheat, and it is stated that large quantities of American Western rye have been purchased for re-sale to Czecho Slovakia and Finland.

INDIA.—The officials report no change in crop prospects and conditions. Under the circumstances the excellent promise of the wheat crop is maintained.

ITALY.—The latest report of the International Institute of Agriculture confirms that the abundant and heavy snows experienced during the latter half of January in Northern Italy were very beneficial for the autumn crops.

HUNGARY.—The weather has turned somewhat milder, but it is not yet possible to estimate the damage caused by the severe frosts experienced recently.

AUSTRIA.—The agricultural situation is generally satisfactory, the fields being well protected by snow.

BELGIUM.—The areas sown to winter grain this year are officially estimated as follows: Wheat, 304,000 acres, compared with 350,000 acres in the previous year, and rye, 524,000 acres, compared with 523,000 acres. Latest reports concerning the condition of the growing crop are not very favorable.

JAPAN.—Seasonable weather is favoring the growing crop, which at last reports was in fairly good condition.

NORTH AFRICA.—The condition of the growing crop in Tunis continues to improve, but the reports from Algeria state that persistently cold, wet weather is not favoring the young plants. The additional sowings effected during January were very restricted.

The Elevator Operator

ELEVATOR COMPANIES SECURE CONCESSIONS REGARDING TAX.

Winnipeg.—What looked like being a fight to a finish between the line elevator companies and the Manitoba Provincial Government over the two per cent profit tax was satisfactorily settled recently, when a large delegation representing the Northwest Grain Dealers' Association waited on Premier Norris, and which resulted in the government conceding the claims of the grain men.

The government, through the taxation department, were attempting to collect the tax on the profits of the several companies having head offices at Winnipeg, no matter where said profits were earned, or whether the business originated and was completed outside the province of Manitoba.

The line elevator companies operated elevators in all three prairie provinces where they buy grain and ship to Fort William, Ont. The companies upon receipt of their tax notices found they were being assessed for the full amount of their profits, notwithstanding what other taxes the companies were paying on part of this business to the Saskatchewan and Alberta governments, and they naturally objected, claiming such taxation was out of the sphere of the Manitoba government.

The new arrangement between the government and the Northwest Grain Dealers' Association is to the effect that the net profits tax on grain transactions by line elevators in future would be levied on the basis of the number of bushels handled and the number of elevators in Manitoba, in proportion to the number in the three prairie provinces.

This decision, however, does not affect commission houses and terminal elevators. The former still will have to pay the tax on profits made on all transactions carried out in the province, because the whole of their business originates and is completed within the province.

At present, taxation officials at the parliament buildings have not included terminal elevators in the lists of those subject to the net profits tax, and whether this happens in the near future is still uncertain.

SASK. ELEVATOR CO. HAD GOOD YEAR.

Saskatoon.—Up to and including January 31, receipts for the crop season, 1921-22, at all branches of the Saskatchewan Elevator Company, totalled 28,600,000 bushels of grain.

Compared with the same period as applied to the 1920-21 crop season, these figures indicate the company has received a total of 7,400,000 bushels more than in the preceding period. In 1920-21, from the commencement of harvest until January 31, the aggregate receipts, all grains, by the company, was 21,200,000 bushels.

The January receipts, 1922, according to the statement just released by the elevator company, indicates 1,600,000 bushels.

Oat receipts were exceptionally light during the past season in the experience of the company. This, it is considered, is due to the low prices obtaining and the heavy damage sustained by the oat crop in many parts of the province, damage which caused many growers to abandon their oat crops without cutting.

GRAIN STORAGE CAPACITY OF TWIN PORTS WILL BE LARGEST IN WORLD.

Fort William.—Records of the handlings of each kind of grain at the different North American centers during the crop year 1921 recently issued by Mr. P. A. Ursell, statistician for the board of grain commission, reveal the fact that the ports of Fort William and Port Arthur still maintain their place at the top of the list for wheat with the total of 173,364,496 bushels.

Buffalo, Minneapolis, St. Paul and Kansas city follow in the order as named, with Duluth, New York and Chicago some distance behind.

In the handling of oats Fort William-Port Arthur holds second place as in the previous year, with 82,729,000 bushels. Fort William-Port Arthur handled 51,005,550 bushels, Buffalo, Minneapolis-St. Paul and Milwaukee following in order.

In the handling of barley, Fort William-Port Arthur takes second place with 12,957,772 bushels. Minneapolis-St. Paul heading the list by a bare 350,000 bushels more, Milwaukee, Buffalo and Chicago following in order.

In flax-seed, owing to the great decrease in the crops of this grain in western Canada, Fort William-Port Arthur's position is fourth, but on the other hand the increase in the crops of rye grown in the prairie provinces has in the last five years advanced Fort William-Port Arthur's position from almost the foot of the list to sixth place.

U. S. Capacity Reduced.

As regards storage capacity of elevators, loss by explosions and fires with no increase by new buildings or additions, has reduced the capacity of both Minneapolis-St. Paul and Chicago and district which hitherto have held the top places on the list for North America. Minneapolis-St. Paul alone stands higher than Fort William-Port Arthur as will be seen from the appended list, which covers the six centers having the largest storage capacities in North America. At the present moment additions to two elevators here, one of which, the Northwestern elevator is well under way, and the other, the Richardson elevator will increase capacity here by three and one half million bushels. Other additions and new buildings contemplated will, if proceeded with, add another one and one half million, so that it is safe to say by the time the crop of 1922 commences to arrive storage of the twin ports will be the greatest in the world.

	Elevators	Bushels
Minneapolis-St. Paul	65	55,195,000
Ft. William-Pt. Arthur	32	53,293,000
Chicago and district	61	49,020,000
Duluth-Superior	26	36,325,000
Buffalo	28	30,950,000
Kansas City	38	27,000,000

HOT BEARINGS THE CAUSE OF FIRES.

Hot bearings are running a close second to lightning in the causes of elevator fires. It is possible to obtain a type of warning which indicates in the office the instant friction occurs, and just where to look for it. Elevator operators owe it to themselves to investigate, at any rate, anything which will tend to reduce this hazard.

OVERHEATED MOTORS A FIRE HAZARD.

The high price of coal and the uncertainty through threatened strikes of regular supplies is forcing many mill and elevator operators to install electric power from central stations. As a means of transmitting power, the electric current is fast being recognized by this class of users, but what they many times fail to recognize is the fact that the elevator and mill present problems different from the ordinary industrial application.

In connection with electric installations there are two main considerations. One is the danger of dust explosion from the spark resulting from un-enclosed fuses and switches. The other is the danger of overheated motor caused by the accumulation of dust in the windings, shutting out the air which cools the coils, and resulting in burn-out of the motor.

The load that a motor will carry is dependent upon several factors, one of the most important of which is the ability to get rid of the heat generated by the passage of electric current through the coils. Openings are left in the windings and frame of the motor to permit the passage of air for the purpose of cooling. When these openings are filled with combustible dust, a dangerous condition is introduced. It may not be serious enough to cause immediate burn-out but if it causes the motor to overheat, the insulation on the coils is very apt to be damaged so that when a little extra load is put on, something lets loose.

It may not set fire to the property, but to get an idea of what it means in expense to the owner, just ask your electrical contracting friends how much it will cost to rewind your motor. The cost of a good motor room will seem tame by comparison. The use of metal lath and cement plaster on frame studding is a very economical construction while the various brands of asbestos building lumber provide excellent material for housing small motors.

DOING BUSINESS BY WIRELESS.

The wireless telephone, which was used so effectively during the war, is coming into its own in a commercial sense, among the grain elevators of Illinois. Several independent houses have made the installation of wireless receivers at a cost of something over $200. This may seem at first glance to be an appreciable amount of money to pay for the receipt of market information, but on the other hand it must be remembered that the primary cost is the only cost.

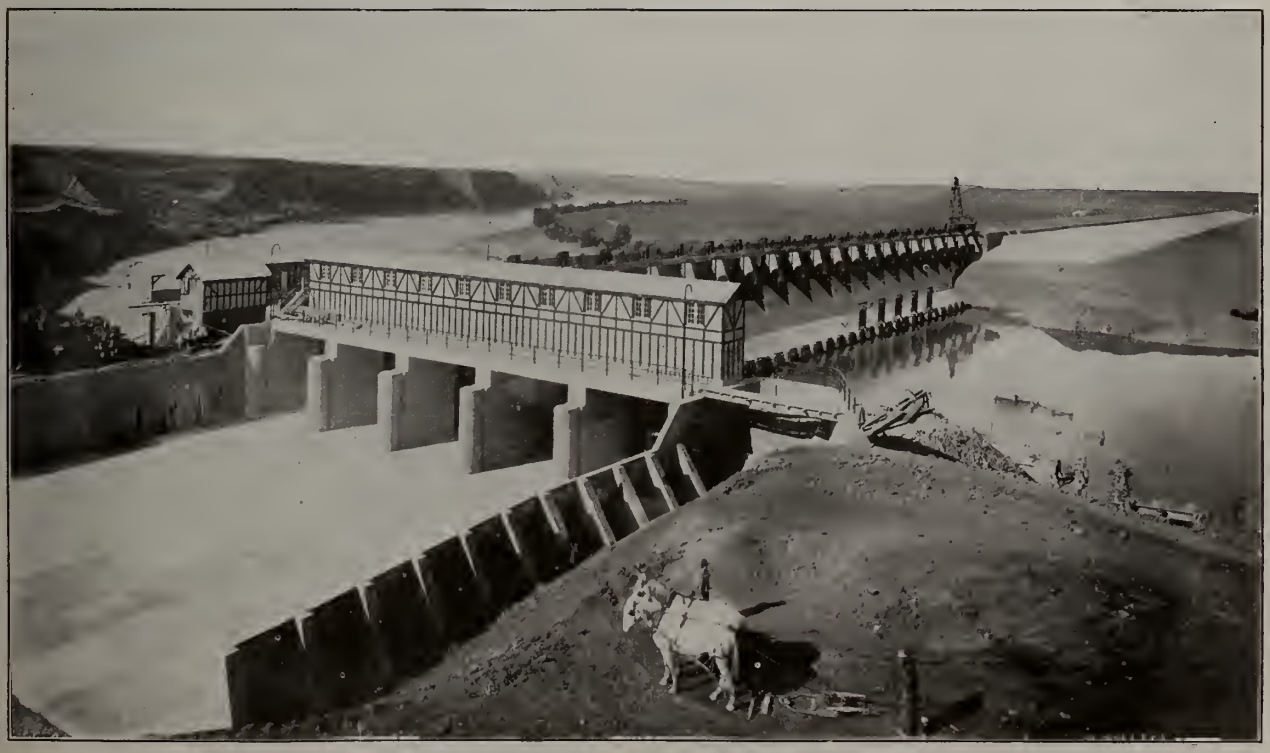
None can realize the value of this device better than the country elevator operators who must use the long distance telephone or telegraph when information is required. While it is true that the telephone calls are largely paid at the other end, and therefore not a monetary expense, they are certainly an expense in the loss of valuable time.

By the new device it is possible to obtain the markets or important market news at regular stated periods every day. It is possible to give an order for execution and have it verbally confirmed, in just a few seconds. That in itself is sufficient to warrant installation by every country elevator within receiving distance of a terminal point.

It is believed that this method will eventually supersede the present private wires and naturally the pioneers will profit the most.

SCREEN WINDOWS AND LOCK DOORS.

Unlocked doors and windows in an elevator always extend a pressing invitation to tramps and loafers who have no occupation. You have heard the story of how several small boys gained access to a compartment under an elevator and there held a smoker. The elevator soon joined the party and 40,000 bus. of wheat was reduced to ashes. Keep all openings locked tight. Windows should also be well screened. Protect your own property and thereby keep down the cost of fire insurance.



THE GREAT BASSANO, (ALBERTA) DAM

Elevator, Mill & Personal Notes

Dunnville, Ont.—The Canadian Allis-Chalmers, Ltd., have sold a 20th Century Flour Mill to Messrs. Martin Kohler & Son.

Swan Lake, Man.—The flour mill of the Swan Lake Flour Milling Co., Ltd., was totally destroyed by fire recently.

Picton, Ont.—The flour and grist mills and stables of Messrs. Pyatt & Hart, were totally destroyed by fire recently. The origin of the fire is unknown but it is thought to have started from a defective electric wire. The loss is estimated at $20,000, and is partly covered by insurance, the greatest loss being on the machinery. The new flour mill was installed only last fall.

Fort William. — Russell McCabe, aged thirty years, assistant electrician at the Grand Trunk Pacific grain elevator, Mission terminals, was taken to McKellar hospital recently, suffering from severe burns upon his face and hands, which he sustained when an accidental short circuit of 550 volts of electricity occurred behind a switch-board where he was working.

OBITUARY

Toronto.—Toronto milling and grain circles regretted to learn of the death in Hensall, Ont., recently, of Mr. Donald Urquhart, one of Ontario's best known manufacturers and exporters. Mr. Urquhart was born in Kent County, near Chatham, in 1845, and lived there until he went into the milling business in Thamesville. After a few years he moved to Hensall where he established and carried on an extensive grain, lumber and milling business. A widow and two daughters survive.

Toronto.—The many friends in the Ontario milling and grain trade of Mr. Lincoln Goldie will sympathize with him in the death, in Guelph, Ont., a few days ago, of his brother, Mr. James Owen Goldie, one of that city's best known and most highly respected business men. Deceased had been associated with the development and welfare of Guelph since the early days. He was born in 1854. His father, James Goldie, established the flour milling business in Guelph, which later became James Goldie & Co., and which was prominent among the large organizations in that line of business in the Dominion. At the death of his father in 1912 James Goldie succeeded him as president of the company and continued to be active in the administration of the affairs of the concern until the family interests were sold in 1918, since which time he has been retired from active participation in business. He had been in ill health lately and his death was not unexpected.

For testing grain in cars a probe has been invented that takes samples from ten different places at once, detecting inferior or dirty grain that may be hidden in the interior of a load.

Mr. E. D. Cassidy, Canadian manager for Messrs. Barnett & McQueen, mill and elevator builders and who has his headquarters at Fort William, Ont., was a recent visitor in Montreal. While in the city Mr. Cassidy was introduced on 'Change by Mr. Thos. Williamson, president of the St. Lawrence Flour Mills Co., Ltd.

Mr. W. L. Parrish, of Messrs. Parrish & Heimbecker, grain merchants, Grain Exchange, Winnipeg, was, on the occasion of a recent business trip to Montreal introduced on 'Change by Mr. Norman Wight, of Messrs. Wight & Esdaile, grain brokers, 42 St. Sacrament St.

Mr. James Stewart, president of the Maple Leaf Milling Co., Ltd., was a recent visitor in Montreal.

Mr. C. R. Vannatter, of C. R. Vannatter Co., Ltd., Toronto, grain dealers and exporters, was introduced on 'Change in Montreal recently by Mr. W. H. C. Dibs.

Mr. R. K. Bishop, flour and feed merchant of St. John's, Nfld., was introduced on 'Change in Montreal recently by Mr. Thos. Williamson, president of the St. Lawrence Flour Mills Co., Ltd.

Mr. Charles Ritz, eastern manager of the Robin Hood Mills Co., Ltd., at Montreal, returned recently from a trip to the British West Indies.

Mr. Fred. J. Anderson, president of the British Empire Grain Co., Ltd., Winnipeg, was a recent visitor in Montreal.

Mr. W. H. McCarthy, of the Maple Leaf Milling Co., Ltd., Toronto, was in Montreal recently.

Mr. Campbell, of Messrs. Campbell & Ottwell, flour millers, of Edmonton, Alta., was a recent caller on Mr. W. C. Omand, in the Traders Bank Building, Toronto.

Mr. J. S. Barker, Managing Director of the Maple Leaf Milling Company, Limited, was confined to his home in Toronto through indisposition for a few days recently.

Mr. Charles Band, jr., son of Mr. C. W. Band, of Messrs. James Carruthers & Company, grain dealers, New York, was a recent caller at the Maple Leaf Milling Company's office in Toronto.

Mr. James Stewart, president of the Maple Leaf Milling Company, Toronto, has returned to Winnipeg after spending some days at the head office in Toronto, reorganizing the various departments.

ENGLAND WILL NOT TAX FOREIGN FLOUR IMPORTS.

London.—In the House of Commons recently, Lieut.-Colonel Campion (Coalition-Unionist, Sussex East), asked the Chancellor of the Exchequer whether he considered the advisability of putting a duty on all imported flour so as to secure the milling of wheat for this country and the offals resulting therefrom.

Mr. Hulton Young: "The answer is in the negative. My right hon. friend the Chancellor of the Exchequer, does not consider this course is advisable."

What About Nature's Way of Tempering Wheat?

(By a Miller.)

Numerous specialized articles have appeared lately in leading milling journals, dealing with the tempering of wheat and its preparation for milling. Without doubt they are all the result of protracted and practical study and each process has achieved its medium of success. Certainly, such ideas are of great value to the milling trade at large and it is only by such friendly and honest co-operation that a maximum of success may be obtained. The favor is gratefully received and we show our appreciation by herewith tendering our suggestions on the subject. We back our arguments up by endeavoring to show they are on a parallel with Nature's own procedure in turning out the ideal wheat berry. We further back it up by stating we have never been able to discover wherein any other treatment is superior.

Close observation shows the outstanding idea to process of milling. This may occur in any or in many of the different operations, undoubtedly it may occur in tempering, for if here we depart from Nature's procedure it immediately suggests that we may lower our standard of quality and lay the foundation for troubles which crop up later in the milling process.

The Application of Water or Moisture.

The application of water or moisture in some form seems to be the accepted standard medium for tempering. In accepting this medium it is not the intention to definitely take the stand this will never change. Who knows? Possibly some oiler may drop his oil can and chewing gum in the wheat bin and next morning he may pull out a lump of dough from the mixture ready to bake. Aside from this vision of the future let us proceed with the facts as we find them.

The several skins of the wheat berry should be

View of the 2,000,000 bushel elevator of the Grand Trunk Railway at Windmill Point, Montreal.

be,—"How can the miller temper wheat to obtain the best general results?" There may be a distinction without a difference, but might an improvement on this study suggest deeper research through, —"How does nature treat wheat to get the best results?" It is respectfully submitted that if you answer the latter question you will get the same result and in getting it you have something definite to work on and observe, namely:—"The growth of a wheat berry."

Aside from those constituent parts which are absorbed by the wheat plant and berry from the soil, only sun, air and rain enter into its growth and maturing. The sun never reaches a degree of heat approaching that of steam or even hot water and although we have warm showers they are at least comparatively cool as compared to the sun heat. This would suggest that some profitable time might be spent by the miller or chemist in the fields discovering just when and where the bran gets its tough qualities and the flour obtains its rich white coloring, etc. Certainly it is impossible to improve upon the natural high grade grain of perfect wheat and possibly a good many millers deteriorate it in the fibrously tough, the central content should be softly crisp for best milling. Let us go back to Nature's beginning with wheat rather than man's artificial manipulation and determine how nature arrives at a solution to this in natural wheat growth. Simply through the process of warming the fields of grain with the long hot days of sunshine, say from 80 to 110 degrees, and alternating this heating with warm or cooling showers, and an abundance of fresh air.

A comparative treatment of wheat before milling may be obtained by dry heating to the necessary degree (this to be determined by the quality of wheat) the whole wheat berry thoroughly to the same degree, to its innermost centre. The natural law of expansion and contraction according to heat and cold will apply here and it is therefore reasonable to suppose there will be an expansion of the whole wheat kernel—a loosening and opening up in texture. Immediately following this heating an application of lukewarm or even cool water should be made. An amount according to the grain being tempered and the result desired, but the law of natural absorption will to a great extent determine the amount of water taken up. The warm open condi-

tion of the berry tends to assist the natural absorption of moisture, or possibly moisture effect into its innermost particles. Only time is now needed to successfully generate the essential mellow condition. The amount of time determined by the quality of wheat.

Wherein does this Nature treatment differ from that of unnatural steam or hot water applied to cold wheat? Simply that when moist steam or hot water strikes the berry it quickly heats the outside skin only. This skin immediately opens up and absorbs the water almost instantaneously but also only superficially; and quickly fills up the fibre forming a tight skin around the berry which retards the further penetration of the moisture into the colder centre of the grain. Possibly, such steam or hot water treatments may facilitate milling in so far as the outer fibres of the grain are concerned but following the same line of thought it is reasonable to assume that only a continued or prolonged application of the costly heat treatment will force even a percentage of the moisture to a further penetration and sufficient heat force to accomplish this is bound to effect the delicate nature of the flour. Most millers have touched on this system and know its weakness. It is only reasonable to expect that sufficient heat to cause almost instant penetration also must be sufficient to cause material physical changes. Certainly under the most favorable conditions it hardly seems to materially improve the color of the flour.

If it is desired to follow through and get the ultimate result of such steam action on wheat this can be readily accomplished by treating the flour itself to a similar but more or less prolonged steam bath and then observing the effect such treatment has on the doughing qualities of flour. Also a similar line of observation can be carried through to the finished bread. It is fair to assume a more or less steam action on the wheat berry afterwards aggravated by the heat generated in grinding must have some comparative effect.

Dry Heat Application Suggested.

Falling back to Nature tempering, the only remaining treatment suggested is another application of a reasonable degree of dry heat immediately preceding entry to the break rolls. The idea of this being that such dry heat will draw any excess moisture from the centre to the outside of the berry, thus further toughening the bran and leaving the grain centre in a wholesome crisp milling condition, easily reduced but retaining the live, sharp, bright quality so much desired in flour.

Simply a continuance of Nature's treatment—"Sun, shower, sun," through the medium of "Heat, moisture, heat" which added to a reasonable amount of time with which Nature is prodigal but exacting, seems to give very fine results.

After having thoroughly tried out this principle in comparison with others it appears to give superior ultimate results, success depending much more upon human judgment of necessary time and quantity of moisture than the efficiency of the treatment. Why not try it out, then try it again, and above all why not endeavor to study what Nature does rather than what we would like to do with Nature. Forget our eternal human drive for once in favor of a little intelligent co-operation with Nature.

RELIABILITY IN BAKING TESTS DEPENDENT ON YEAST QUALITY

Of all the factors which make experimental baking tests difficult and uncertain, yeast is perhaps the most important. Several different brands have been tried in connection with this work, but it does not appear that any of them is sufficiently uniform for satisfactory results. It is obviously desirable, indeed, one might almost say essential, to use a rather large quantity of very active yeast so as to shorten the fermentation period of the dough in order to enable the operator to complete the baking tests within a reasonable number of hours. It is scarcely feasible to carry on tests in which the fermentation continues through the night. Dry yeast cannot, therefore, be used. Variations in moist yeast are extremely great. It has been suggested by some investigators that uniform results can be obtained by measuring the amount of carbon dioxide evolved in a given length of time, but this alone does not give all the information desired. Dr. C. E. Saunders, the Dominion Cerealist at Ottawa, fully believes that two different samples of yeast evolving the same amount of carbon dioxide in the same length of time, may behave quite differently when used in the making of bread. In order to obtain the most trustworthy results possible one should prepare one's own yeast in such a way as to secure perfect uniformity. This would, however, be a task of considerable difficulty and up to the present it has not been possible to adopt this method in the experiments carried on in these laboratories. Millers are, therefore, obliged to content themselves with yeast of more or less uncertain activity and to realize that the baking results obtained on one day are not strictly comparable with those obtained at another time from another sample of yeast. While this uncertainty makes the results less uniform than they should be, it does not invalidate the conclusions drawn in any ordinary case.

Rufus Redd Dogg

"Fr'm what I hears fr'm diff'rent sources," volunteered Rufus during a lull in the conversation at Bud Enderby's corner grocery store one night, "ther' seems t' be no end t' th' opinions regardin' th' profits 'r losses in gristin'. Wan 'Dusty' goes s' far as t' say thet h'd rayther see th' Wheat Board dug up an' put t' work agin th'n monkey with th' gristin' business—when it comes t' a matter o' financial considerations."

"Then, ther's another sez gristin' don't pay but he has t' do et t' keep trade. Another he sez, sez he, thet he's goin' t' cut out gristin' as he's afeard sum o' th' agrarians in th' neighbourhood is goin t' convince him sum day thet he shud pay them f'r th' privilege o' doin' ther' gristin f'r them, let alone charge them annythin' f'r takin' a few bushels of wheat an' handin' back a bag 'r two o' flour and th' bran an' shorts inta th' bargain."

"F'r me," concluded Rufus, ignoring Dibby Hilton's mournful wheezing spell which just at that minute started, "I buys all the wheat thet's brought t' me at mark't price, an' I sells back th' flour an' th' feeds at mark't prices. Since I find thet I've allus a little more in th' till at th' end o' th' day than I had at th' beginnin', I figgers that's good bus'ness."

DETERMINING CIRCLE OF COSTS IN FLOUR MILL ACCOUNTING

In studying the application of cost accounting to flour milling, Power Costs are subject to separation which should be made for comparison. These costs should be divided into fuel costs, labor, insurance, oil and supplies, merely to determine from period to period the comparative costs in order to eliminate waste.

Depreciation and repairs are Burden costs that are not always given the attention that they deserve. One hears the statement, "Our plant has no depreciation because we are always making repairs to keep it in condition." But experience shows that there is a great deal of depreciation not preventable by repairs, such as the inevitable wearing out of machinery and buildings. Depreciation is just as legitimate a charge against milling as is labor itself.

Detailed Separation Not Necessary.

The Productive Costs of a continuous process industry are not so complex as those in machine work or job work, for example, in which each machine must have an accurate schedule for its burden charges, for heat, space, light, interest, etc. In milling, or any other continuous process industry, such detailed separation would merely tend to cover up the actual figures that we are endeavoring to attain. It is, therefore, only necessary to consider burden costs as a whole.

Our consideration so far has been based on actual and direct charges which are easily determined, as the charges present themselves, without any distinction as to the actual amount of operating time consumed in comparison with the possible time available for operation. The charges so far considered cannot be used to determine the cost of manufacturing a barrel of flour at any particular time without consideration for the actual time consumed in operation.

Most millers know that flour made under conditions of a 24-hour operation is made at about 60 per cent actual cost per unit as compared with flour made under a 12-hour operation. It is equally obvious that there is no profit in milling under conditions of a 12-hour operation when production costs are figured on the basis of a 24-hour operation. It is, therefore, essential that a schedule be made which will permit idle time to be charged as an actual and legitimate cost of production. The most effective stimulus for reducing waste and idle time is to show that it costs something.

Calculating Idle Time Costs.

To make such a schedule it is necessary to make a schedule based on a full time operation. This determination can be taken as the minimum cost of manufacture per unit and can be designated the minimum rate. This rate must be determined by the experience of a number of months, or even years, with careful adjustment to meet changing conditions from time to time. It can be determined accurately enough for all practical purposes.

Let us see now just how such a minimum rate is determined, on the basis of actual experience as well as by analysis. It is clear that most items making up burden costs are the same whether the plant is operating or idle. Costs when operating, on the other hand, are greater than the idle costs by a certain amount of labor, power, etc., which accountants call use-costs, the items for which are operating depreciation, labor and power as above named, possibly additional interest, taxes, repairs and rental based on the experience and records of past performance. If we know in addition the ratio of idle time to occupied time, we can distribute the idle time to each particular order. The calculation of idle time would be made something as follows:

The minimum rate of cost per barrel would be established as outlined above, which would represent the cost per barrel on a 24-hour operating basis. Presume, then, that the plant were operating only 16 hours, or two-thirds of capacity. The order is then chargeable for its share of the idle time in that ratio. If the mill is operated two-thirds time, it is then idle one-third of the time, and its idleness costs one-third as much as its occupancy. For example, it costs 60 cents per barrel for manufacture on a basis of 24-hour operation. Idleness of one-third time would cost one-third of the minimum rate of 60 cents or 20 cents per barrel. The sum of the two, the minimum rate of 60 cents and the idle time costs 20 cents would give the actual cost of 80 cents per barrel on a 16-hour operation.

That is, since the operating charges are already charged to the order on the basis of full time operation, the idleness can most easily be charged as a ratio of the amount already charged. While this is not accurate to the absolute detail, because of some discrepancies in individual cases, for all practical purposes it is accurate, and is a valuable method for determining the cost of idle time. Any discrepancies can be eliminated by the experience of operations over given periods.

An objection may be made to this method on the grounds that a mill not under full time operation cannot sell in competition with a mill which is operating 24 hours. This argument does not, however, justify one closing his eyes to the actual cost of manufacture, competitive value notwithstanding. As stated before nothing stimulates energy so much as to know that idleness costs something and to know just how much.

The theoretical basis for computing selling price is, or should be, the actual cost for each particular order on the percentage of operation actually accomplished in the manufacture of that order, plus a reasonable profit. We all know that competitive conditions do not permit such figures at all times, in fact some may think that they do not permit at any time, and yet an effort in that direction is a tonic seriously needed in milling to-day.

The other broad division of the systems is Selling Charges. The items which are exclusively chargeable to Selling are usually easily determined. They are, salaries, traveling expenses, telegrams, telephone messages, office supplies and advertising. For purposes of eliminating waste it is usually customary and useful to make such separations. This closes the determination in the circle of costs.

Ed. Note.—The above is the second of a series of articles on The Application of Cost Accounting to Flour Milling, which commenced in Canadian Milling & Grain Journal issue of March 15, 1922. Further articles will appear in future issues of the Journal.

THE PRACTICAL MILLER

DILAPIDATED MILLS

A flour mill that has been allowed to fall into disrepair is a nuisance to the owners and the operative alike. The community in which this mill is located suffers a loss as well as the owners and the operative. If a mill is not producing results that are profitable to the owners and if they do not secure sufficient business to operate their plant continuously that mill is not handling the amount of money through its local banks it ought to handle and this money, instead of going to that community, goes to some nearby town or possibly out of the province.

This, of course, cripples the banks just that much for they haven't the amount of money on deposit to loan to the miller or to others in their community and for this reason the rundown mill that is not producing results and operating at full time is partly the cause of financial troubles in that locality. Therefore, to be a good citizen and help the community in which he lives, a man must keep his business up to the highest point of efficiency and, in so doing, he will receive his reward—better local business.

It is often the case that a dilapidated mill is caused by the management being too greedy and they do not set aside a certain percentage of their earnings to be put back in the mill as "improvements." Should a farmer run his farm in the same way his ground would soon be so poor that it would be impossible to raise a profitable crop thereon. It is the same way in the mill and each mill should set aside a certain per cent. which is known as "depreciation" for the sole purpose of keeping it in repairs and for improvements.

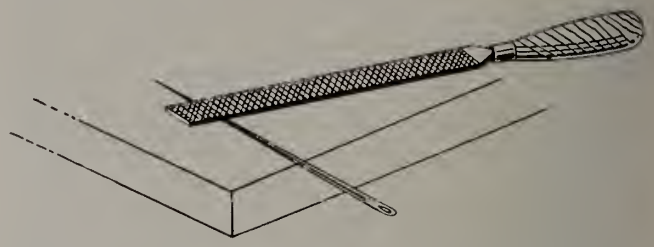
A mill cannot be operated in a miserly way and be a success. The owner's bank account may grow for awhile under such conditions but the depreciation on the plant will be so much that it will take this bank account and more to repair the mill. A great many are fooling themselves by losing sight of this fact. This depreciation comes gradually and because the plant becomes inefficient so gradually the owner does not realize his condition until too late he finds his trade gone.

HOW TO SHARPEN SEWING NEEDLES.

Flour packers may use three different kinds of needles for sewing cotton bags. First, a straight needle; second, a needle having a curve near the point, and third, a split-eye needle. These needles come in several lengths to suit the man using them and also for different kinds of bags. For instance, a burlap bag requires a longer and a stronger needle than a cotton sack on account of the twine being heavier. Naturally, a bigger eye in the needle is also required.

While it is well for needles to be sharpened on a grinding wheel, so good a job can be done with a file that that there is no excuse for the packer whose needles are not in good sewing condition. Any file will do, but a smooth-cut file, from six to eight inches long, is preferable.

To sharpen a needle grasp it by the eye end with your left hand and place the point on a convenient table. Then, with slow even strokes dress down the cutting edge of the needle to the proper angle. If it is a split-eye or common needle it is important for one to maintain the same bevel that it had when it was purchased. It should not be made any flatter or more acute, for the needle manufacturer is supposed to have discovered the best cutting angle for the particular kind of work the needle is expected to do. Push the file always against the cutting edge.



Do not file a particle more than is necessary to bring it to a sharp edge, as too much filing is simply waste of time, file, needle and energy.

Sometimes a needle is bought which is of such good steel and so well hardened that the best file makes but little impression on it. In such cases one should procure a good piece of emery cloth, wrap it closely round the file and go ahead. The emery paper will do the work that the file cannot touch and will give the needle a razor edge.

ASCERTAINING DEGREES OF BOLTING.

All flours contain a catalase, or enzyme which possesses the property of being able to decompose hydrogen peroxide into water and oxygen. The by-products of milling contain the largest amount of this enzyme, and it varies in flour according to the degree and effectiveness of the bolting. By measuring the volume of oxygen liberated in a given time from a given quantity of hydrogen peroxide, a given weight of flour being used, an indication of the degree of bolting the flour has received can be obtained. This method is said to be more accurate and rapid than the other chemical tests employed to measure the freedom of the flour from impurities.

BACK DRAFTS AND INFERIOR FLOUR.

One often hears of millers producing flour of inferior grade when the whole trouble originated in the abrupt turn of wind trunks from scourers that created back drafts and prevented the machines from pulling off the dirt they had released.

If it is obligatory to make a 90 deg. bend in a wind trunk from any grain cleaning machine, the inside curve of the trunk should be made on a radius of at least the width of the trunk and the outside curve on a radius of at least twice the width of the trunk. Short turns of wind trunks should be avoided, if possible. When wind trunks discharge outside of a building, no obstruction should be built on the outlet of the trunk to interfere with the free discharge of the air and its burden of dust. Incidentally, no wind trunk should discharge outside of a building. It creates a bad fire hazard and a good dust collector will pay for itself several times each year.

THE PRACTICAL MILLER

MAKING PULLEY CALCULATIONS.

Here is a short and exceedingly simple method of making pulley calculations which may not be generally known. The chief feature of the system is its cancellation possibilities.

Suppose it is desired to determine the revolutions of a driven pulley, the revolutions of the prime mover and the diameter of all the pulleys being given. Multiply the revolutions of the prime mover by the sum of the diameters of all the drive pulleys and divide by the sum of the diameters of all the driven pulleys.

The cancellation should be used wherever possible, as in the following example:

A motor runs 560 R. P. M. The pulley on the motor is 24 inches in diameter driving a 36-inch pulley on a shaft that also has a 30-inch pulley driving a 40-inch pulley. How fast does the 40-inch pulley run? We may solve this as follows:

$$\frac{560 \times 24 \times 30}{36 \times 40} = 280 \text{ R P M}$$

To determine the size of a drive pulley use the same rule as if you were installing a motor and had all of the pulleys but the motor pulley and wanted to know what size to order with the motor. Knowing that you want to get a speed of 280 R. P. M. just put the figures 280 below the line and leave the space vacant where 24 appears in the former example and cancel as follows:

$$\frac{560 \times 30}{36 \times 40 \times 280} = \frac{1}{24} \text{ or } 24"$$

To determine the differential in the diameter of pulleys or the number of teeth in gears required to obtain a certain required speed, use cancellation as far as possible and invert the result. For example, a line shaft runs 240 R. P. M. It has a 60-inch pulley on it, driven from a 42-inch pulley and there is being installed a motor with a speed of 600 R. P. M. Now to keep the line shaft at required speed of 240 R. P. M., there will have to be two pulleys, one on the motor and one on the shaft with the 42-inch pulley.

To find the size or differential of these pulleys proceed as follows:

$$\frac{560}{36} \times \frac{24 \times 30}{280} = 40"$$

To determine the size of a driven pulley use the same rule. Supposing that you had everything but the last driven pulley leave the space vacant where the 40 appears and cancel as follows:

$$\frac{600 \times 42}{240 \times 60} = \frac{7}{4} \text{ or } \begin{matrix} 4 \times 6 = 24" \\ 7 \times 6 = 42" \end{matrix}$$

The proof of this calculation may be shown as follows:

$$\frac{600 \times 24 \times 7}{42 \times 60} = 240 \text{ R P M}$$

The differential is at the ratio of 4 to 7. To get traction multiply both numbers by 6 and it gives 24 and 42, which would be all right for a small motor.

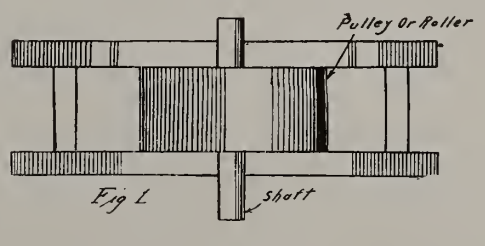
TURKISH MILLERS ORGANIZE.

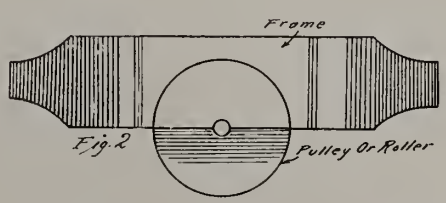
The millers and the flour dealers in Constantinople have formed an organization named the "Association des Minotiers et des Négociants en Farine et en Céréales de Constantinople," in order to encourage co-operation among those engaged in the trade. The association will also undertake arbitration of all matters connected with the flour trade. Its temporary headquarters are in the offices of the "Minoterie d'Orient," Omer Abed Han, Galata, Constantinople.

SAFEGUARDING ROLL HANDLING.

There is possibly no more delicate operation in mill work and one requiring greater skill and patience than the handling and moving of rolls when it comes time for them to be sent out to be recorrugated.

The accompanying sketches show a strong, handy and dependable mill roll truck, which can be





put together in a comparatively short time by the mill carpenter or any one accustomed to working about with a hammer and saw.

Fig. 1 is a bottom view of the truck. The frame should be of 2 x 6 plank reinforced near the ends as shown. The pulley or roller can be easily picked up about the mill.

THE PRACTICAL MILLER

CLAIMS SOFT WHEAT MILLERS NEED THOROUGH KNOWLEDGE OF BLENDING.

"We do not know whether you realize it or not, but there is a big and comparatively new field to cover—to canvass for business. It has scarcely been touched; in fact, it might be said that only the surface has been scratched. What we refer to is the blending of Spring and Winter Wheat Flours.

"It was only a short time ago that the writer was told by a very well-known flour milling expert that unless the mills of the Central States resort to blending they would be forced to discontinue business. We feel free to say that our opinion coincides with his. Few people realize how serious the situation is, and but a limited number of Central States millers are giving the subject the consideration it deserves.

"It is a foregone conclusion that millers of soft wheat must resort to blending in order to hold their trade, and to meet the competition of the hard wheat flours going into their territory. The soft wheat miller can no longer depend upon holding his entire trade with an unblended soft wheat flour. It has become necessary to add the flour from hard wheat so as to meet the baking requirements of his clients. Some of the more up-to-date soft wheat millers have seen the 'handwriting on the wall,' and have been progressive enough to adapt themselves to the situation, but the vast majority are lagging behind, and if they do not do something they will surely be out of the running.

"The hard wheat millers are not going to have plain sailing either. Inquiry among them will show that a goodly number have taken the initiative and put in blending machinery to enable them to mix a certain proportion of soft wheat flour with their product so as to give the latter a better flavor.

"When one approaches a prospect on this subject he ought to point out to him that nearly every baker has his own ideas about the kind of flour he uses. It is only a few bakers who have the necessary blending equipment which will enable them to blend according to their particular requirements. So isn't it only natural that they will patronize the flour mill which will furnish them with what they want. The whole situation summed up means that the mill which has blending facilities and the miller who has familiarized himself with the fundamental principles of flour character can meet the most fastidious demands of any prospective flour buyer."

"This subject upon which we are writing is one which you ought to bring up whenever you are in conversation with a miller. Call his attention to the vital points we have enumerated, and you will find that he will listen attentively. We predict that you will excite his interest and perhaps work him up to the point where he can be induced to buy."

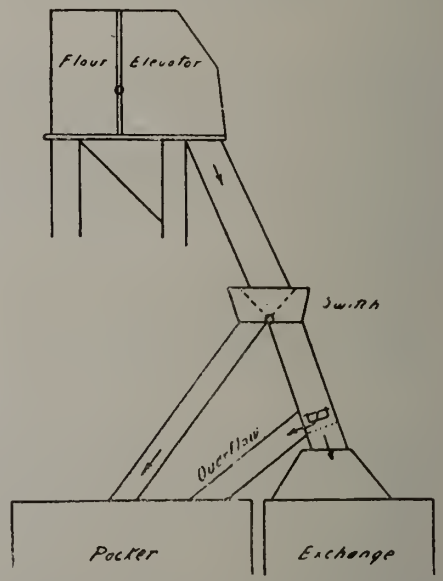
"There is another matter to which we wish to call your attention, and that is the making of Self-Rising Flour. They have so many points in their favor that the demand for Self-Rising Flours is increasing by leaps and bounds.

The above is an extract from a letter written to their salesmen by The S. Howes Co., Inc., Silver Creek, N.Y. There are somewhat similar conditions in some districts in Canada. This company has just issued No. 78 catalogue on "Flour Mixers."

Self-Rising Flour has come to be as staple among millers as Patent, and yet there are a surprising number who do not know the advantages of Self-Rising mixtures, nor how to go about mixing them. New catalogues as a rule, are not particularly interesting unless you happen to be in the market for the machine featured. But this is an exception. It contains a brief, but well written and complete history of Self-Rising Flour, and goes on to describe the mixing process and principles involved, but without tedious technicalities. The process is shown in detail by text and illustration. The machines are illustrated and described in such a clear manner that their particular virtues are manifest.

SAVING LOST CHOKE-UP TIME.

This useful device for avoiding roll chokes on flour will save lots of flour and not an inconsiderable amount of hard work. It can be used in any mill and will pay for itself on the first choke-up. The exchange spout discharges into an inverted hopper at the top of the exchange bin.



In the exchange spot a short distance above this inverted hopper is a 2-inch opening into the overflow spout to the packer bin. The stream will jump this opening until the exchange bin gets full, then it will go down the overflow. The same idea can be used also on the packer spout.

MALTA WANTS CANADIAN FLOUR.

Toronto.—Millers in the Toronto district have received enquiries from an import house in Malta for prices, c.i.f. Malta, which indicates that that island is evincing an interest in securing flour from Canada. It is suggested that shipments should be made via England. Six flour mills are located on the island, and there is keen competition for business. Flour must contain not less than 35 per cent. of wet gluten to meet the sanitary laws of Malta.

THE PRACTICAL MILLER

CLAIMS WASHING GLUTEN FROM FLOUR DOES NOT DETERMINE BAKING VALUES.

Increasing skepticism is apparent in the attitude both of scientists, practical millers and bakers towards the quantitative results of washing out gluten from flour as a means of determining the baking value of the flour. In a recent paper by Dr. Frederick L. Dunlap, on the Baking Efficiency of Flour, several recent scientific utterances are quoted as to the indeterminate character of the results obtained by washing out gluten. Ostwald says there is still no method by which baking quality can be determined quantitatively in a laboratory; and Neumann, another authority, emphasizes the fact that a baking test is the only available method at the present time.

Proceeding, Dr. Dunlap quotes from Luers to the same effect:

"The method of washing out gluten is insufficient for analytical purposes. In summing up all these facts we have come to the same conclusion as did Jessen-Hansen from his experiments, namely, that the washing out of gluten is useless as an analytical method. The amount of gluten greatly depends upon the prevailing reaction of the medium and upon external influences. Even at small concentrations of acids, so small that they did not correspond to the optimum concentration required for the baking quality, the washing out of gluten becomes impossible; the same applies to yeast doughs after completed fermentation, in which case the washing out of gluten is hindered by the swelling, which in turn is due to carbonic acid."

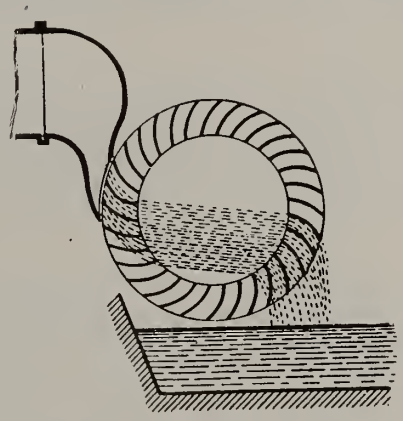
Experimental Work on Gluten.

Referring to the experimental work on gluten by Calvin and Upson, Luers further remarks: "Finally, different investigators have submitted to extensive criticism and testing the method of washing out the gluten, and their results agree in all essential points with the views expressed by us. However, we agree with Jessen-Hansen that the method of washing out the gluten is to be rejected in reference to drawing conclusions based on the amounts of washed out gluten, while Upson and Calvin, on basis of their experimental researches and theoretical considerations, propose a standard method, in which the chief consideration is to do the washing out with freshly distilled water. Still, as pointed out, other investigators, too, put the main stress on the quality of the washed out gluten in opposition to the quantity. The proposed standard method will, consequently, render good service, if the qualities of gluten will furnish an insight into the baking quality of the flour under consideration."

A NEW TYPE OF WATERWHEEL.

A new hydraulic turbine, which differs radically from both the Francis and Pelton types, has been attracting a good deal of attention recently in Europe. It is the invention of Professor Banki, of the Polytechnicum in Budapest. The radical feature of the turbine is that the water strikes it twice instead of but once as in the Francis and Pelton types.

As may be seen in the sketch, the water is directed against the wheel almost on a tangent; striking the blading on the near side, it gives up some of its energy and is deflected through the wheel to the opposite side, where it gives up more energy on its way out. It is necessary, of course, to have a clear space for the water to pass through, and so the wheel is made of two discs, which are held together by the blades. It is claimed that in a series of tests in Budapest on Banki turbines of varying diameters, operating under different heads and speeds, the efficiencies obtained ranged between 80 and 90 per cent. This is taken as bearing out the chief claim of superiority of the Banki turbine, which is that it will operate with the same high efficiency at low and high heads and at different speeds.



Turbines of the Francis and Pelton type always have a certain fixed speed at which the most efficient operation will result and which is determined by the head of water and the diameter of the wheel. Any deviation from this fixed speed is made at the sacrifice of the unit's efficiency. On the other hand, a high speed is generally desirable, because the first cost of an electric generator decreases in almost direct proportion as its speed increases (capacity being equal). Frequently, therefore, high efficiencies are secured only by the increased first cost of a slow-speed generator.

A PRACTICAL IDEA FOR TRUEING ROLLS.

Get some true shafting, 1 15-16 is a workable size, cut from one-eighth to a quarter of an inch longer than the rolls to be trued. Also get some medium coarse emery cloth, which you probably can't get as long as your rolls, so cut it spirally and splice it—then there will be no space at the splice which does not grind. Get some good glue and glue the emery smoothly on the shaft.

Tram the rolls perfectly, place the shaft on top of the rolls and start them up at their regular speed. The shaft will revolve just whatever the differential is. If the rolls are in bad shape the emery cloth will have to be changed twice or maybe three times, but it will true up and polish the rolls smooth as glass.

It is well to go over the rolls again before the final grinding with the cloth to be sure they are still in perfect tram.

This grinder is also a sure cure for ringing rolls or rough or rusty spots. A few minutes' work will cure these troubles.

THE PRACTICAL MILLER

CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

FOR SALE—50-barrel Midget Marvel Mill with elevators, beltings, etc., and complete installation for flour mill plant. Also grain grinder, ton per hour capacity. Good reasons given for wanting to dispose. Will sell cheap. Terms given for satisfactory paper. Reply Box 145, Carleton Place, Ont.

WANTED—Single or double Naylor Bleacher which was manufactured at Essex, Ont. State full particulars, conditions, and best cash price in first letter. Reply Box 109, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED — By Head Miller, with 20 years practical experience in modern Canadian mills up to 4,000 barrels capacity. Can guarantee best results as to quality and yield on both hard and soft wheat, and maintain mill at highest point of efficiency. At present in charge of a 1,000 barrel plant. Reply Box 85, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

PRACTICAL MILLER with 23 years experience seeks position with plant having daily capacity of 250 barrels or upwards. Can furnish excellent references. Reply Box 82, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—A 50-barrel Midget Marvel Mill, also complete installation of a flour milling plant. In use about three months. Machinery must be moved from actual premises. Good price for cash. Reply Box 103, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Head miller, with twenty years experience in 150 and 275 barrel mills, and still employed, is desirous of making a change. Applicant is 36 years of age, married, and can furnish excellent references. Reply Box 84, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

SALESMAN WANTED for the Province of Quebec. State requirements, experience and salary wanted. Reply Box 102, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

CYLINDER COCKLE MACHINE wanted. Must be in good condition and reasonable. Reply Mr. Charles Wyild, Ripley, Ont.

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THE PRACTICAL MILLER

WANTED—A high grade man to represent in Western Canada a leading manufacturer of grain cleaning and special machinery, on straight salary basis. Prefer a young hustler, a man of good appearance, one not afraid of work and with some experience in elevator and flour mill work, and with some acquaintance among the trade in the territory named. Apply as below, stating age, whether married or single, experience, salary expected and other information available. Will be required to reside in the territory.—Address Golden Opportunity, c/o Canadian Milling & Grain Journal, Dubrule Building, Phillips Sq., Montreal, P.Q.

FOR SALE—Flour mill properties, some operated by water power, others by gas engine and electric power. Write me before buying. Prices, $3,200 to $15,000. List your mills with me for sale. No listing charges and quick results if propositions will bear inspection. Apply E. Armbrust, Niagara Falls, South, Ont.

WANTED—Best price on second-hand Midget Marvel Mill, also, terms, if any. Reply Box 93, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED TO EXCHANGE—A 20-inch McLachlan Chopper for a 15-inch Moore or Vessot, after April, or will buy. Reply F. H. Robinson, merchant miller, Cookstown, Ont.

MANAGER AVAILABLE—Has had ten years experience, five years of joint management in a 100-barrel mill. Applicant is 28 years of age and unmarried. Temperate and a good worker. Salary required depends on capacity of mill and size of town in which located. Reply Box 108, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

FLOUR SALESMAN open for immediate engagement in the Maritime Provinces. Experienced. Reply Box 104, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FLOUR SALESMAN, speaking English, French and Spanish, seeks connection with milling concern. Reply Box 106, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Miller, thirty-seven years of age, is open to take charge of small or medium-sized mill, or to take position as second miller in large plant. Has had twenty years experience. Thoroughly familiar with all branches of milling. Can furnish excellent references. Reply Box 107, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

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THE PRACTICAL MILLER

ELECTRICAL HAZARDS IN MILLS.

A mill and elevator insurance concern gives the following short and snappy log of a mill fire from an electrical hazard:

1. Wiring in conduit. Joints not soldered; just covered with friction tape.
2. Vibration of building caused wires at joints to come in contact with conduit.
3. Conduit grounded, but ground wire had become broken.
4. This condition of the wiring caused fuses to blow. Instead of looking for the trouble, fuse blocks were plugged.
5. Fire broke out at point where conduit and metal siding came in contact.
6. Discovered in time to prevent a total loss.

Moral—Electricity is a bad actor when it gets out of control. Be sure you take all precautions to keep it within bounds.

The Question Box

With a view to making this department one of real service, "Canadian Milling & Grain Journal" cordially invites its readers to send in their problems to The Question Box. There are but very few millers or elevator operators who do not have worries in the proper conduct of their plants. It may be due to lack of experience or inability to trace cause and effect. The logical and sensible thing to do is to ask someone who may possibly know. Often he is not at hand, and still oftener the perplexed miller or elevator operator does not want to show his lack of knowledge. Under these circumstances he can address his inquiry to the craft through this journal. His name will not be divulged if he wishes to remain incognito. Someone is sure to reply who has had similar problems to meet or similar questions to ask. We guarantee to devote all the space necessary to the asking and answering of questions, so do not be backward in sending them in.

THE EDITOR.

QUESTION.—"Which is the best way to grind to product the least ash in flour?"

ANSWER.—The wheat should be opened out fully on first break, kept up reasonably strong on second break and held off as much as it is possible on the last three breaks on a 5-break system. The idea in the use of break rolls is to reduce the wheat with the least injury to the bran and germ, that is, let attention be given to the care of the bran and any middlings and flour so made will automatically take care of themselves. One cannot injure the flour made on breaks, nor can he really injure the middlings. He must first injure his bran and by doing so he will injure all three.

Care should be taken not to have roll adjusting springs too tight, but only tight enough to hold them to their work and at the same time to yield to any slight variations of feeding.

In the grinding of prime middlings on smooth rolls, the aim should be to reduce middlings as fine as possible, but to neither flake nor injure impurities missed in purification.

The whole question of ash is determined always by the efficiency with which the break rolls are handled.

The Duster

Here is the original of all the mother-in-law stories in the world. As Mr. Caveman was gnawing at a bear bone in his cave one morning, Mrs. Caveman rushed in and said: "Quick, get your club! Oh, quick!" "What's the matter?" growled Mr. Caveman. "Sabre-toothed tiger is chasing mother," gasped his wife. Mr. Caveman spat on the floor. "And what the blazes," he asked, "do I care what happens to a sabre-toothed tiger?"

Thursday is regarded as an unlucky day for weddings in Scandinavian countries.

Why Thursday?

TO-DAY'S BEST STORY

A flour salesman whose route had for several years taken him through a little Quebec village stopped one afternoon at the gateway of a farm wherein dwelt a worthy habitant and his spouse, to both of whom such modern matters as race-suicide was quite unknown.

The buxom lady of the house came to the gate with a lusty three-months-old in her arms. She looked forlorn and tired.

The salesman, after greetings, in his most affable manner inquired, "Well, well! Is this the last?" meaning, of course, the youngest.

"Qu'il plaise à Dieu, je l'espère" (May it please God, I hope so) the lady replied, wearily.

A Scottish boy and an English boy were boxing. At the outset the Scottish boy proved superior, and punished the English boy severely. But presently, after a few rounds, the Scottish boy became cautious. He defended himself instead of attacking, and allowed his nimble opponent to rain blows upon him rather than move out of the way.

"What's the matter, Sandy?" cried his father. "Jump about a bit!"

"I can't!" replied Sandy, stolidly. "I'm standing on a nickel."

Ikey and Izzy were separating after an evening together when Ikey said, "Au revoir."

"Vat's dat?" asked Izzy.

"Dat's 'good-bye' in French."

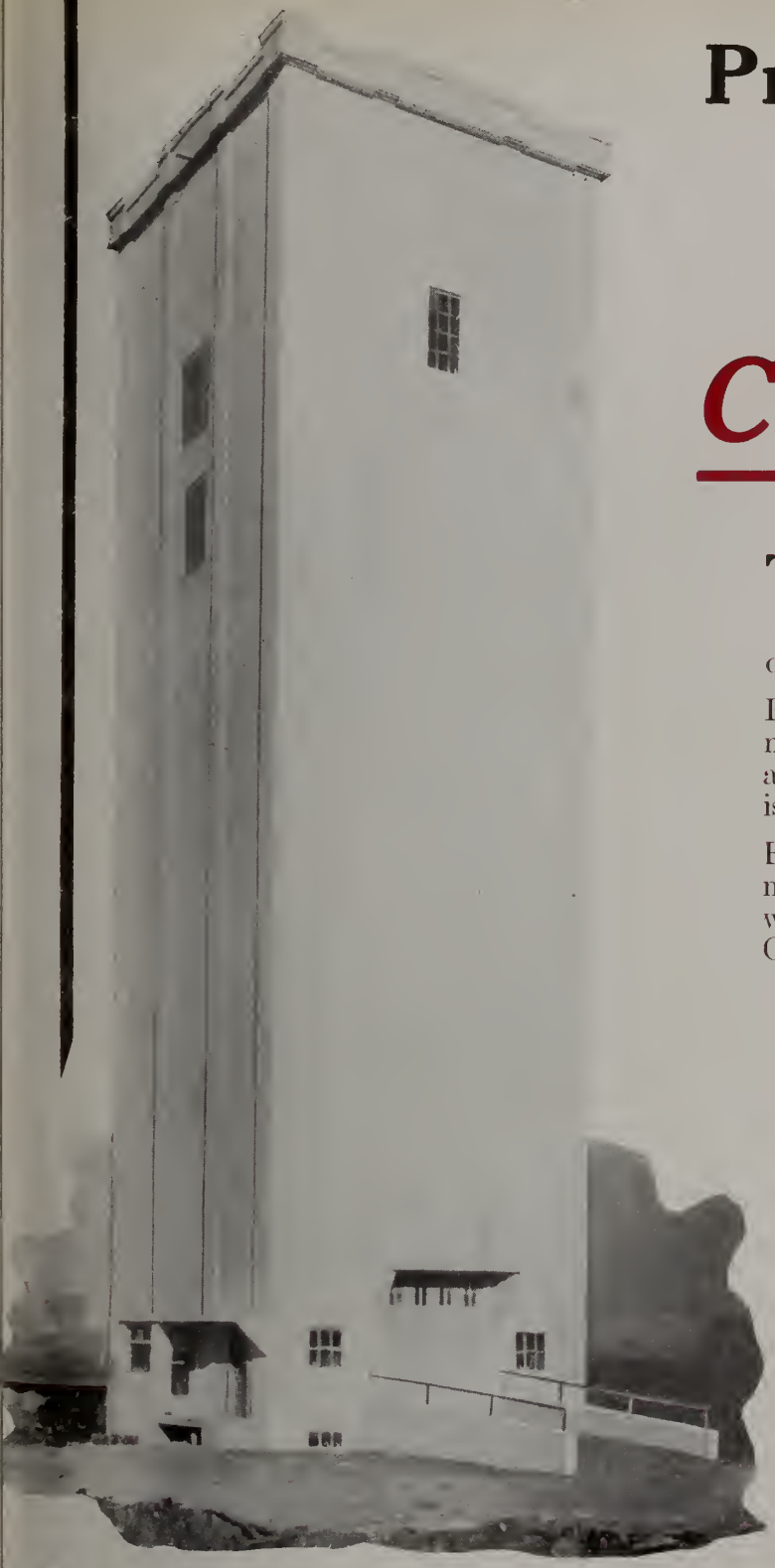
"Vell," said Izzy, "Carbolic acid."

"Vat's dat?" asked Ikey.

"Dat's 'good-bye' in any language."

Expressing surprise at the slim attendance of members in the British House of Commons during a debate on the naval estimates, Lady Nancy Astor, who is the only woman in the Mother of Parliaments asserted that "if the question of drink restriction, had been under discussion the House would have been full."

Oh, Nancy. What DID you mean?



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CANADIAN
Milling & Grain
JOURNAL

VOL. III MONTREAL, APRIL 15th, 1922 No. 6

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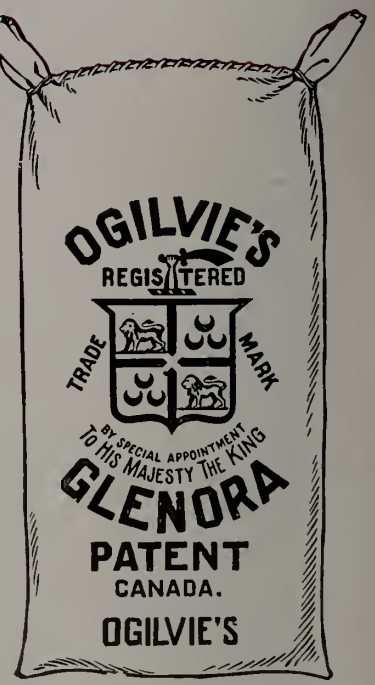

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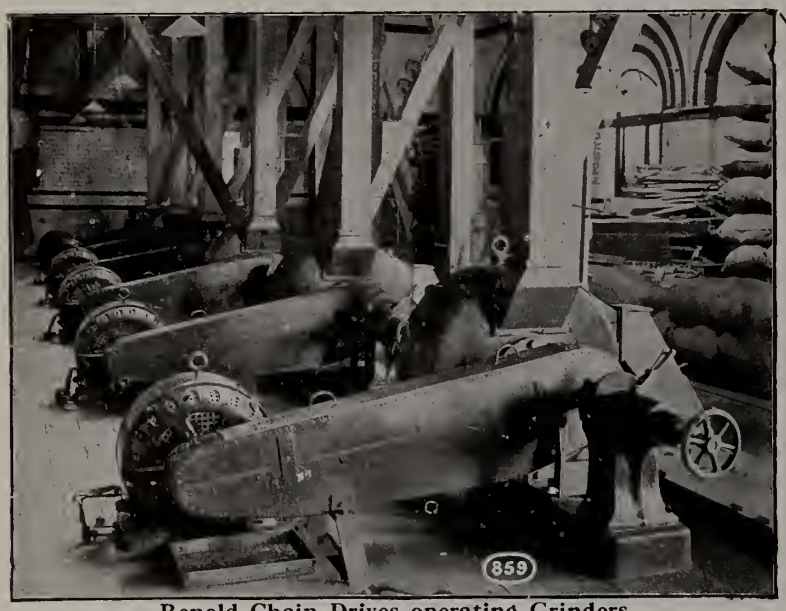

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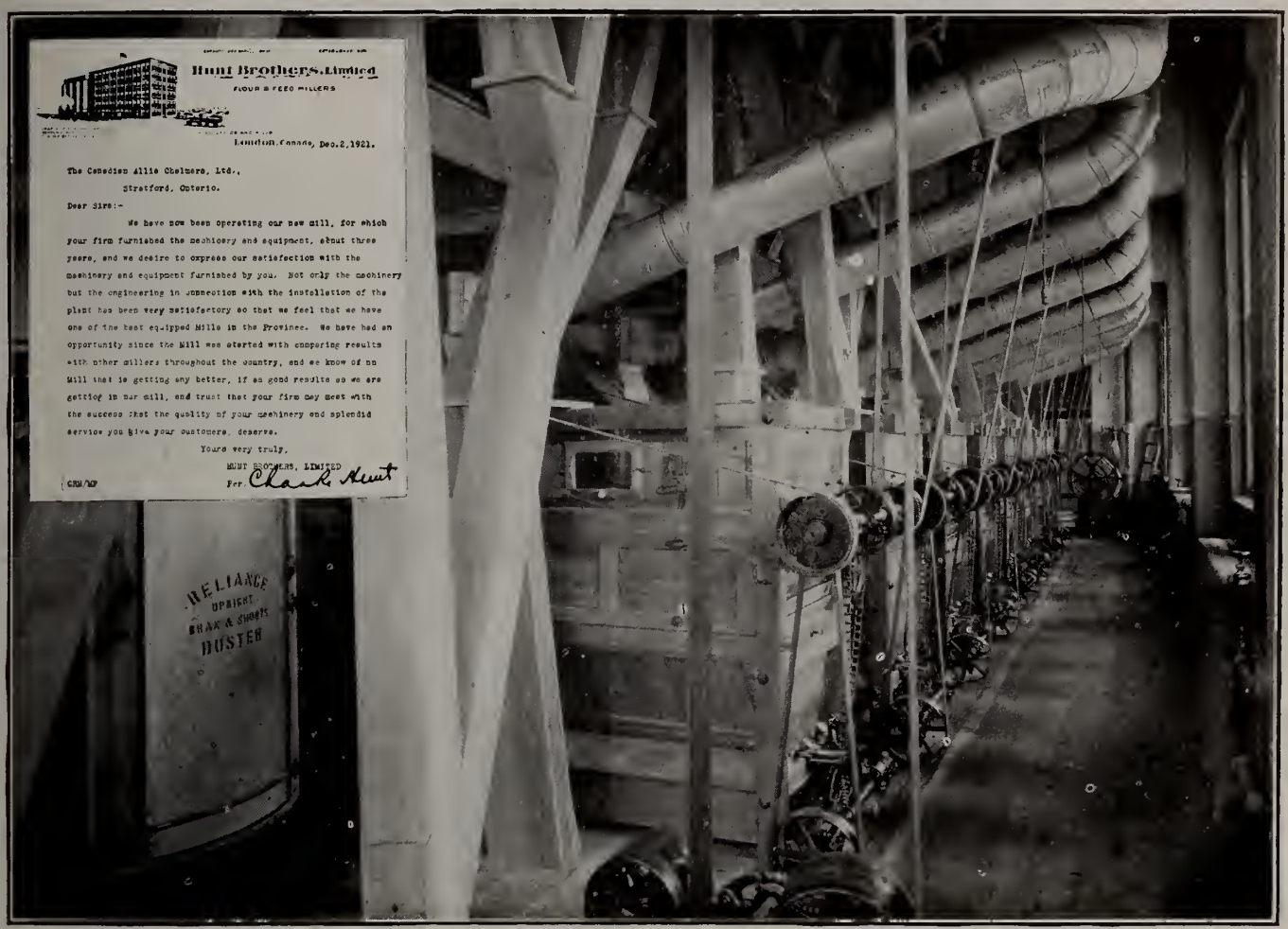
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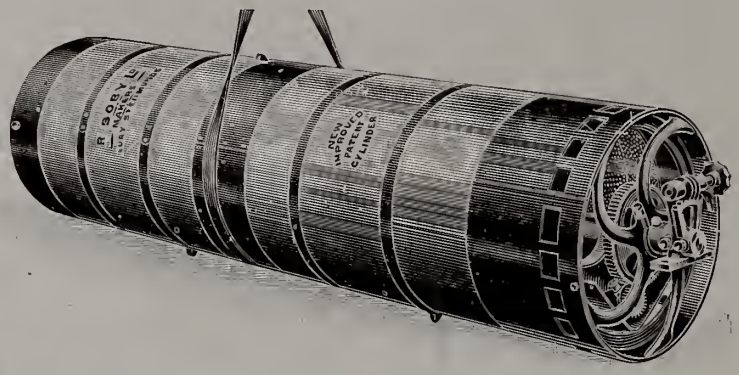

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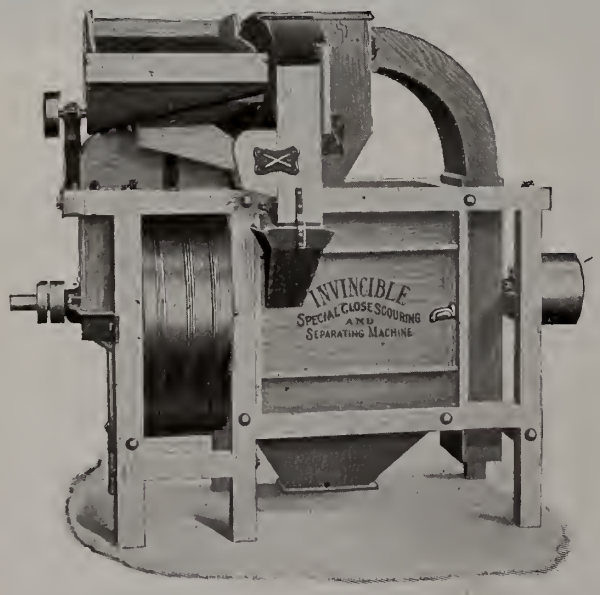

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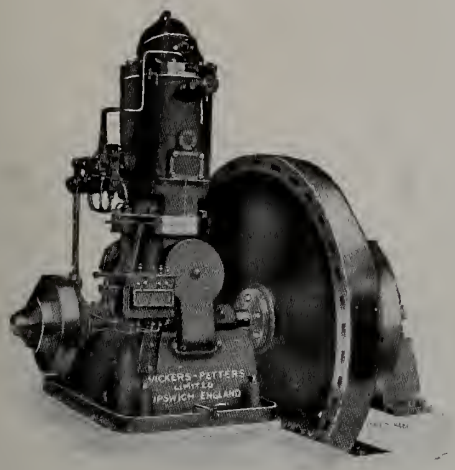

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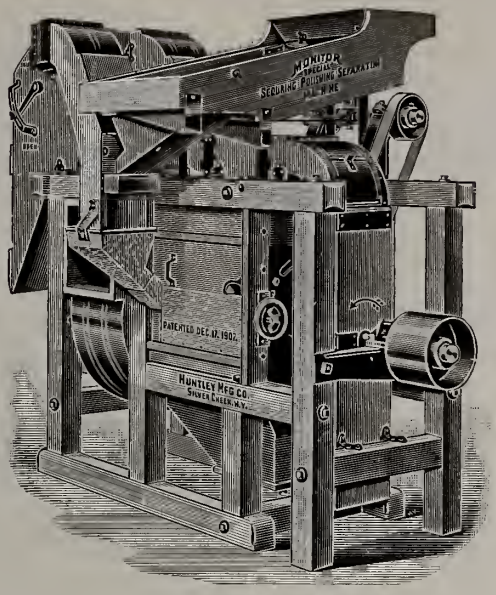

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VOL. III MONTREAL, APRIL 15TH, 1922. No. 6

CANADA'S ONLY MILLING AND GRAIN PAPER

More Arguments Against Control.

IT cannot be too strongly impressed upon the minds of those who would ruthlessly wreck the existing efficiently organized grain handling system of the country by re-introducing control, that the professional grain speculator performs an important function in the development of the nation's business, and that to drive him out of business by depriving him of his means of earning a livelihood would mean the destruction of a continuous market for essential hedging operations; the disarrangement of the highly delicate machinery for recording the opinions of traders; the lessening of pressure in prices from above and below, and the restriction of necessary interplay and competition between the different markets. These effects would naturally throw greater risks on the actual merchandisers and force them to take out larger margins to protect these risks. It is also probable that there would result a very much greater amount of speculation in the commodities themselves with a correspondingly greater chance of manipulation on the part of powerful financial interests.

The commercial history of any country as reflected by the development of business in that country shows that as a general rule the more highly organized a trade the higher the plane of commercial morality practised in that trade. On the whole, the grain exchanges represent the highest type of business organization and the highest development of efficiency in marketing that can be found.

The competitive system of the grain exchanges ensures for the growers better prices all round than they might obtain under any system of control, for it must be remembered that if world conditions had not enabled the former Wheat Board to sell on a rising market, the best price being obtained being more over 40 cents per bushel than was required to cover the Government's guaranteed price, the Government would have had to make up out of the national treasury the difference between the actual selling and the guaranteed prices.

Overhead Charges in Milling.

THE overhead charges in milling a barrel of flour are, as a general rule, very high for the small and medium capacity mills; in fact, it is so high that it is difficult to figure a profit.

There is an everlasting demand to cut down the salary of the miller. Why should the miller have his salary cut below the actual cost of living or providing for his family?

The main trouble is due to the fact that a great many mill owners do not know the actual cost of production; consequently, they are everlastingly cutting the price of their products, forcing their competitors to do likewise, and making milling unprofitable; then the poor operative has to suffer.

Flour is, by far, the cheapest food in comparison to others and there is no reason for the cutting down of the miller's salary in order to make a mill profitable for, unless a miller is satisfied, he is not a worker in the interest of his employer.

Get a man for your miller who is a man; pay him well; but make him come to time in yield, capacity and quality of the goods, for there are too many that are merely bluffing their way through as millers and the mill owners are throwing away years of their profits by employing incompetents.

A Few Years From Now.

IT is an economic certainty that the first normal crop year which war-torn Europe enjoys will witness an exceedingly sudden and drastic decline in the exportation of Canadian wheat. Up to now, to a certain extent the emergency conditions of the war years have continued. Europe's wheat production, even without considering Russia, has remained below requirements and in the past two years the problem of finding employment for millions of demobilized men has gone far towards restoring milling in Europe to its pre-war state of activity.

The question arises what will be the position of the Canadian milling industry when Europe is able to raise all the wheat she needs? If it is able merely to hold its own and to continue its flour exports on the present scale the result will be disastrous for the grain grower who, because of tariff barriers or big crops in other countries, will have no outlet for possibly a couple of hundred million bushels of wheat. If, on the other hand, the Canadian miller can expand his foreign markets, as he should in every way be encouraged to do, he will not only benefit himself, but will greatly help both the farmer and the live stock interests.

It would appear, therefore, of great moment to prepare solidly and wisely for the future, for the time will come when wheat exports begin to decline and the Canadian grain grower will be looking in

vain for an outlet for his product. Just now it is proving difficult, but not by any means hopeless for the Canadian milling industry to exploit and build up an expanding export market for their product in the face of tremendously strong competition afforded by wheat, but if the record of past years can be taken to mean anything there is coming a time when the bottom will drop completely out of foreign grain buying either from Canada or the United States. When that happens, the welfare of the western wheat grower with all that that implies will rest on the shoulders of the exporting miller.

Immigration and Economics.

AMONG the most pressing problems awaiting the attention of the new Government at Ottawa, and one which can be solved only by the putting into effect of a sound policy, is that which pertains to immigration.

Over two years ago when a serious shortage of harvest labor appeared to be imminent "Canadian Milling & Grain Journal" expressed the opinion that if not only the harvesting but other economic problems of the country were to be solved in a practical manner, the immigration barriers would have to be lowered even at the risk of allowing into the country some who might, under strict laws, be classed as undesirable but who would be most likely, in newer and better environments, to become good citizens.

Nobody, of course, wants to see a flood of undesirable immigrants from some of the semi-civilized countries of Europe, although as a result of the war and the subsequent peace treaty it becomes a difficult matter to draw a line of demarcation between those who should be welcomed and those who should be kept out.

As an unquestionably safe commencement, however, there are countries such as England, France and Belgium from which Canada could draw a perfectly desirable class of immigrant were it not for the severe conditions imposed at present.

Immigration creates work. The railroads are all busy carrying the people and their effects and all the things that they immediately need as soon as ever they get to their destination and begin to work. Industries of all kinds are stimulated from the builder who puts up houses to accommodate the increased population to the other workers who feed and clothe and amuse and transport them.

The Canadian railroads, industries and other national necessities have all been planned on lines that contemplated a great extension of population. If that population is kept out there will be loss all round.

Remedial Action Most Urgent.

ALTHOUGH despite the restrictive tariff legislation of the United States and other foreign countries Canada's flour export trade is showing no appreciable diminution in volume, the prospects of increasing this export trade would appear less encouraging than they have been for many years past.

The destruction of established foreign trade connections as a result of the operation of government control; the influence of certain foreign elements in vigorously advocating a wheat-buying policy at the expense of flour; the exchange situation which makes it doubly desirable from the foreign standpoint to economize on purchases from Canada in every possible way; all these things have combined to make the possibility of increased flour export business in the immediate future very uncertain.

There is no doubt, however, that the handicaps just mentioned can in a large measure be overcome if millers are placed in a position that they can handle foreign flour shipments on a basis equitably adjusted to that applying to wheat.

With fair freight rates and an efficient and economical system of loading flour at seaboard, Canadian millers can undoubtedly meet the competition of wheat. Steps have already been taken by the Canadian National Millers' Association to rectify the rate inequalities; and, while the solution of the loading problem will cost money, the total expense of equipping one or two seaboard terminals with machinery for the proper loading of flour sacks does not seem a very alarming amount to risk. If the port authorities interested will themselves make the required investment, the flour exporters will have won a clear victory, and a long step in advance will have been taken in maintaining a sound national policy with regard to exports of flour and wheat.

Recreation and Our Forests.

ONE of the things about forest conservation which has caused it to advance with rapidity is the fact that it injures no interest and benefits all. The forester and the farmer will never quarrel, because the forester desires for growing forests only those lands too poor to grow farm crops. Again, the forester does not want to build a ten-foot fence about his forest to keep out hunters and fishermen and campers. The forests are natural recreation grounds and to use a forest for this purpose is to put it to one of its legitimate uses. Often in Western Canada a forest reserve may contain the only picnic and camping grounds for miles around. The people of the surrounding district are not kept out but are encouraged to use these places. Practically the only conditions are that they be careful with fire and do not otherwise injure the forest. This plan has developed a spirit of co-operation throughout the West. Besides this, to some of the lakes in forest reserves people come from long distances, and they go back home strong supporters of forest conservation. During the past season one of the beauty spots on a western Dominion reserve was visited by people from Sherbrooke, Quebec, Toronto, Winnipeg, Moosejaw, Calgary, Okanagan, Edmonton, Vancouver and Victoria, and from outside Canada the visitors came from England, Ireland, United States, Brazil and Honolulu. The advantages of this practice to both country and city are very great and will increase as time goes on.

The commission man's ability to do business on the grain exchanges of the country depends upon his maintaining at all times the high standard of integrity insisted upon by those organizations, and their clients are protected to that extent by those rigid rules, which is one of the strong reasons why these institutions must be continued in active operation.

EASTERN PROVINCES

MONTREAL

Dubrule Building
Phillips Square

Tel. Plateau 1983

MONTREAL APRIL 15TH, 1922

THE MONTREAL MARKETS.

Flour.—There have been no recent developments in the local flour situation, business in spring wheat grades being quiet in all directions owing to the fact that both domestic and country buyers have ample supplies on hand and to arrive for the balance of this month. The tone of the market is steady and prices are unchanged with car lots of first patents quoted at $8.50, second patents at $8, and strong bakers at $7.80 per barrel in jute bags, less 10c per barrel for spot cash.

The condition of the market for winter wheat flour continues much the same as the above, the movement being light and prices steady with car lots of choice grades being quoted at $6.75 per barrel in second-hand jute bags, ex-track, and broken lots at $7 per barrel ex-store, with winter wheat patents at $7.50 to $7.75 per barrel in new cotton bags, ex-store. The demand for white corn flour is also slow at $5 to $5.10 per barrel in jute bags, delivered.

Millfeed and Rolled Oats.—The market for all lines of millfeed remains steady, but the volume of business is only fair and chiefly of a hand-to-mouth character. Car lots of Manitoba bran are quoted at $32.25, and shorts at $33 per ton, including bags, ex track, while broken lots of bran in mixed car orders are selling at $28.25, shorts at $30.25, and middlings at $32.50 per ton, less 25c per ton for spot cash, and pure barley meal selling at $38 to $40, pure grain moullie at $38, and feed cornmeal at $35 per ton, including bags, delivered. A steady feeling prevails in the market for rolled oats, but business is quiet in standard grades at $3 per bag of 90 lbs.

The Baled Hay Market.—The baled hay market is without any special feature to note, prices being steady with a moderate amount of business passing for the season for local and outside account, and sales of car lots of good No. 2 timothy being made at $29 to $30; No. 3 timothy at $27 to $28, and clover mixed hay at $24 to $26 per ton, ex-track.

Grain.—The export trade in grain here has been very quiet of late, there being practically no demand from foreign buyers for supplies for May-June shipment, but there were sales of a few odd loads of No. 1, No. 2 and No. 3 northern wheat on passage reported. Recent advices received from New York by wire stated that it was at present extremely difficult to confirm any important wheat business in that market for export account and the market on the whole was very dull and inactive. Corn sales are also light and the trade in oats is small.

There is no improvement in business in the local cash grain market owing to the continued limited demand for supplies from both domestic and country buyers. The feeling is steady and prices are unchanged with car lots of No. 2 Canadian western oats quoted at 63c; No. 3 C.W. and extra No. 1 feed at 59c; No. 1 feed at 58c, and No. 2 feed at 57c per bushel, ex-store, and American No. 2 yellow corn at 78c per bushel ex-store in Canadian funds.

SAYS DESPATCHES MISLEADING.

It was stated recently by Mr. J. K. Smith, Manager of the Transportation Bureau of the Montreal Board of Trade, that recent despatches from Winnipeg to the effect that on April 20th a reduction of 5½ cents on lake and rail domestic rates to Eastern Canada would become effective were misleading. The 5½ cents reduction on grain, said Mr. Smith, was on domestic rates to the New England States from Fort William. With the opening of navigation the usual differential of five cents for lake and rail traffic under the all-rail route would become effective in Eastern Canada, as in previous years.

The Winnipeg dispatch on which this comment was made, reads:—

"**Winnipeg.**—Reduction in lake and rail freight rates on grain and grain products of 5½ cents per 100 pounds on grain for domestic consumption at destination and one cent per 100 pounds on grain for export, applicable between the head of the lakes and points in eastern Canada and eastern United States, have been announced here by Canadian Pacific Railway freight officials.

"The reduction on export rates goes into effect on April 20 and on domestic rates April 29."

CORN EXCHANGE OPPOSES CONTROL.

The Montreal Corn Exchange will oppose the revival of the Canadian Wheat Board.

At a special meeting held in the Board of Trade recently, it was decided to send a delegation to Ottawa, at the proper time, to voice protest. Meanwhile a special committee was appointed to draft objections and ask for an appointment with the Government. The committee consists of Messrs. G. A. Burton, Norman Wight, F. A. Heywood and Howard D. Strachan.

The president, Mr. Howard Strachan, said action was imperative. The opinion was expressed that the Government might as well endeavor to fix the pay of the grain dealers as determine the price at which wheat should be sold.

Mr. H. W. Raphael pointed out that the situation was a most serious one and that they should make the strongest possible protest against the proposed board.

The Board of Trade will support the Corn Exchange in their opposition.

MILLING STOCKS IN STRONG ADVANCE.

Much comment was caused recently by the sharp upswing in flour milling shares. Inquiry revealed no more specific reason for this remarkable appreciation than that business is continuing to improve. The companies interested are reported to have received a heavy volume of orders of export account at the time when wheat prices were soaring. This naturally enhanced the price of flour, and the millers were fortunate in having comparatively low price wheat on hand for the filling of these orders. An examination into the book values of some of these companies also furnished a reason, and a strong one for the advances noted.

It takes an organization to fight disorganization, in flour distribution as well as any other business.

MUCH NEW ELEVATOR CONSTRUCTION THROUGHOUT DOMINION THIS YEAR.

An echo of the tremendous Canadian crop of 1921 which, diverted from the usual channels which took it across the border, rushed to Canadian, Atlantic and Pacific ports, taxing their capacities to the limit, is being heard in the demand for increased elevator accommodation throughout the Dominion, says Agricultural and Industrial Progress in Canada. A new factor has entered into the situation giving Canada and Dominion ports greater control of the traffic and export of her own crop, and it is recognized that vastly increased storage space is going to be needed to accommodate future crops pending their shipping.

The consistent annual increases in the volume of Canada's grain crop has rendered imperative a corresponding yearly increase in elevator storage capacity, and each year sees new elevators dotting the grain growing provinces. At the last time statistics were taken, Canada had 3,775 elevators with an aggregate capacity of 214,279,964 bushels. The insistent demand at the present time is not at railway shipping points, but in the expectation of handling a greater proportion of Canadian grain at Canadian ports these termini are facing the need of greater storage space. Though 1921 was for Canada a record grain handling year, more traffic would have accrued to her could more have been handled, and on both the Atlantic and Pacific a certain amount of business had to be refused. It is in this direction that expansion is planned.

Montreal Harbor Board's Plans.

The Harbor Commissioners at Montreal are working on plans for a grain elevator of ten million bushels capacity which will be the most capacious in the world, exceeding by half a million bushels that elevator at Port Arthur which at present holds the honor. The growth of the volume of grain in and out of the Port of Montreal has made the construction of more elevator space absolutely essential, as during the past year, which exceeded in activity anything Montreal has ever known, business had to be refused owing to lack of accommodation. The sudden effect of the United States tariff on Montreal traffic is revealed in the fact that it was considered that the present volume of grain traffic would not be reached for fifteen years, and the present capacity, 10,250,000 bushels, considered adequate.

More Grain Storage at Vancouver.

Additional elevator accommodation is to be provided at Vancouver during the present year according to well-defined plans. Here the need is serious the present capacity of the port, 1,266,000 bushels, being inadequate and the capabilities of the port being severely strained during the past season.

Vancouver entered upon a new era of activity when it was discovered that grain could be shipped without injury via the Panama Canal route to Europe, and an ever-increasing proportion of the Prairie Provinces' crop seems destined to go out in that way. It is expected that by the end of the season some four million bushels of wheat will have been shipped through Vancouver, and only the lack of elevator accommodation prevents the handling of a greater volume.

It is also announced that another half-million is to be added to Fort William's capacity, and even the 55,000,000 bushels accommodation of the Twin Ports is experiencing the strain of the lakes grain traffic on its way to the Atlantic.

These times refer only to a somewhat extraordinary demand for terminal elevator accommodation brought about by sudden conditions. At the same time the ordinary increase of country elevators and interior elevators contiguous to the harvest field, made necessary by the yearly swelling crop, is being met. And all this is making for increased activity in a hundred industrial lines in which this progress is reflected.

Will Publish Details as Available.

"Canadian Milling & Grain Journal" has already published preliminary details of many of the new elevators construction of which, if not already under way, starts this year. For the benefit of those engaged in the handling and sale of milling and elevator machinery and equipment as well as for the information of its many readers "Canadian Milling & Grain Journal" will publish full particulars of each new mill and elevator as same become available.

WONDER WHAT IT GRADED?

Chicago.—Wheat which are known to have been used by primitive man 10,000 to 15,000 years ago, and which is still cultivated in certain parts of the world, form part of the new exhibit of cultivated wheats which has recently been added to the economic collections of Field Museum of Natural History here.

THE CHICAGO MARKETS

The following table compiled from figures furnished by Messrs. Logan & Bryan, members of the Winnipeg Grain Exchange and the Chicago Board of Trade, C.P.R. Telegraph Chambers, Montreal, show highest price levels recorded on Chicago Board of Trade from March 28, 1922, to April 12, 1922, inclusive.

	Mar. 28	Mar. 29	Mar. 30	Mar. 31	April 1	April 3	April 4	April 5	April 6	April 7	April 8	April 10	April 11	April 12
May Wheat	1.34½	1.34¼	1.36¼	1.35	1.32	1.34½	1.35	1.38⅜	1.31¼	1.31⅜	1.33	1.34¾	1.33⅞	1.33¾
July Wheat	1.20½	1.19¾	1.20⅛	1.19½	1.17½	1.19¼	1.19½	1.19½	1.19⅛	1.20⅞	1.22⅜	1.22⅜	1.21¼	1.21⅜
May Corn	0.59⅜	0.58¾	0.50	0.59	0.57¾	0.58¾	0.59⅜	0.58⅜	0.58⅝	0.58¾	0.59⅜	0.60	0.60¼	0.60¼
July Corn	0.62¾	0.62	0.62¼	0.62¼	0.61⅜	0.62¼	0.62¾	0.62⅛	0.62⅜	0.62⅜	0.62¾	0.63⅝	0.63⅞	0.64
May Oats	0.37⅜	0.37⅜	0.37½	0.37⅝	0.36½	0.36⅞	0.37⅛	0.36⅝	0.36¾	0.36⅞	0.37⅞	0.37⅝	0.37⅞	0.37¾
July Oats	0.39¾	0.39⅝	0.39⅞	0.40	0.38¾	0.39⅜	0.39⅜	0.39¼	0.39¼	0.39½	0.39¾	0.40¼	0.40½	0.40¼
May Rye	1.04½	1.04	1.03¾	1.03	1.02⅞	1.02	1.02⅞	1.01½	1.02	1.01⅝	1.01¾	1.03¼	1.02	1.01½
July Rye	0.95¼	0.95	0.95	0.94¼	0.94⅛	0.93¼	0.93¾	0.93	0.93¼	0.95⅝	0.93¾	0.95¾	0.95¼	0.95⅜
May Barley	0.67½	0.67½	0.67	9.66⅜	0.66¼	0.63⅜	0.67	0.66½	0.66	0.65¾	0.65½	0.65¾	0.65½	0.65⅜

ONTARIO

TORONTO

TORONTO APRIL 15TH, 1922

THE TORONTO MARKETS.

Flour.—Export business continues slow, quite a number of the mills having closed down. The prevailing quotation for Manitoba flour is forty-four shillings and six pence but United Kingdom buyers do not seem inclined to pay this price. Domestic business is also extremely quiet. Ontario winter wheat flour is scarce and is still beyond an export price basis. The domestic market is paying from $6.25 to $6.40, Toronto and Montreal, for Ontario winter wheat flour.

Oatmeal and Rolled Oats.—Some small lots of oatmeal and rolled oats have been sold recently but at a price which leaves practically nothing in the way of profit for the mills. The general line of bids from the U. K. have been from three to five shillings below what the mills here can afford to accept. Rolled oats are quoted at $3.10 to $3.15 per ninety pound sack on the Dominion market.

Millfeeds.—The demand for millfeeds is falling off slightly and there is no big demand, as formerly, for straight cars, although there is some demand for flour and feed. The market generally, however, is quiet, a condition largely due to the bad condition of the roads occasioned by the spring break-up. In many sections of the country the roads are impassable. Many dealers have considerable stocks on hand and they are not moving out as fast as the trade would desire. Of course there is a certain volume of trade passing but it does not bulk large. Export business is unusually dull owing to a seemingly entire lack of confidence in the market, and production is still limited, due to the continued dullness in flour for export and the restricted trade in the domestic market. Bran is quoted at $28.25 to $32.25, delivered: shorts $30.25 to $32.50, feed flour, per bag $1.90 to $2.

Grain—As to the future trend of old wheat prices on the local market considerable variance of opinion is heard. One dealer stated recently that he thought hard wheat prices would go considerably higher before the new crop and there seems to be a fairly general opinion that prices will work to prewar prices. It is felt that recent heavy liquidation will not go much further. Generally speaking, local trade continues slow, with little sign of activity being resumed until grain can be brought down by water. While there have been price fluctuations from day to day during the past ten days, recent quotations have not shown much change. It is pointed out that while the supply of world wheat will not leave much surplus at the end of the crop year, it is estimated that there will be sufficient to supply requirements. Some traders are bullish on the outlook for the next season's crop. They look for a light yield of winter wheat in the United States, although conditions in the Southwestern States at the present time appear to be favorable to the growing crop. Local trading during the past ten days has been slow, with millers buying wheat sparingly. Cash No. 1 Northern wheat was moved up ½ a point to $1.50 on the 9th of this month in Toronto on the Bay port basis. Oats were also up ½ point, No. 2 C.W. going at 58 cents, while American corn on the all-rail basis was half a cent higher, No. 2 yellow being offered at 75 cents. Western oats are in demand to some extent and buyers here and there are taking a carload of grain from the Bay ports where same was available. Milling demand for wheat is very light. It is the general opinion that the wheat market is suffering from lack of interest in grain for immediate shipment.

Seeds.—Seeds are beginning to move somewhat but slowly as yet. Selling prices of best quality Government graded recleaned seeds are nominally quoted as follows: Alsike per cwt., $20.00; Red Clover, $29.50; Red Clover, late mammoth, $31.50; Sweet Clover, $9.00; Timothy, $11.0; Alfalfa, Ont., $31.00.

FORT WILLIAM FARMERS AGREE TO RAISE BUCKWHEAT FOR OGILVIE MILLING CO.

Fort William.—The call from the Ogilvie Flour Mills Company for farmers to grow buckwheat in this vicinity has met with a very good response, according to Mr. V. W. McLean, who said recently that his company had received a number of assurances from farmers that they would give this crop a good trial during the coming summer. One man has undertaken to plant ten acres, another fifteen, and others have undertaken to grow from five to ten acres, the farmers writing to the company ranging from within a short distance of the city to as far away as Nolalu. Mr. McLean says that they can absorb the crop that can be grown on about three hundred acres. Another farmer has undertaken to plant a few acres of millet, which ought to do well here, and the seed of which is also used in the manufacture of stock feed, the Ogilvie Company importing about a carload a year.

It is said that, in order to grow buckwheat successfully in Thunder Bay district, it should be sown a good deal earlier than is customary in the east, as the crop does not have the scorching summer sunshine to contend with here that is apt to spoil the plants just as flowering season on eastern farms. It is said that it can be safely planted about June 1st in this locality.

QUOTATIONS ON BRAN AND SHORTS.

The following nominal quotations on bran and shorts have been reported by the Canadian National Millers' Association, Coristine Building, Montreal, to the United States Customs Authorities as the prices of these commodities now in effect. These prices are the net cash prices in bulk, f.o.b., the mill:

	Bran.	Shorts.
Montreal	$25.50	$27.50
Toronto	25.50	27.50
Port Colborne	21.00	23.00
Fort William	19.00	21.00
Keewatin	18.50	20.50
Winnipeg	18.00	20.00
Moose Jaw	14.00	16.00
Calgary	9.50	10.50

UNIVERSITY REPORT SHOWS MILLING VALUE OF PRINCIPAL WHEAT VARIETIES.

Ottawa.—An exhaustive report has been issued by the University of Saskatchewan which is of very great value to the Canadian milling and grain trade. It shows the milling value of the important varieties of wheat grown in western Canada and many of less importance which have been tried at the field husbandry plots at Saskatoon. The samples on which these investigations were based were grown at Saskatoon, so that they are all comparable as far as environment is concerned.

It has been found possible to divide the several wheat varieties into groups, according to their milling value. Group No. 1, having the highest milling quality, includes marquis, red fife, Kitchener and red bobs. Group No. 2, having fairly good milling quality, but not equal to those above mentioned, includes white bobs, white fife and Taylor's wonder.

Group No. 3 consists largely of bearded wheat. These have not usually given as favorable milling results as the second group. Group 3 includes prelude, pioneer, Chelsea and Preston, the Preston being the only one in this group which is commonly grown. Group 4 includes the ruby variety only. It has given such contradictory results that it will be further investigated. Group 5 included club, redstone, Alaska and Kinley. These wheats are of undoubted poor quality so far as producing flour suitable for the making of bread is concerned.

Amber Durum Varieties.

Group 6 includes the amber durum varieties, among which are kubanka acme, a selection of the kubanka which is unusually rust resistant; Pelissier, a black-bearded, white chaff, durum wheat, which, like the acme, is decidedly rust resistant. Milling investigations of durum wheat are rather meager, but such as have been conducted indicate quite clearly that there is considerable variation in the value of the different varieties of this group.

Group 7 includes red durum (D-5), which is dark red in color, resembling the red fife in some respects. The milling quality of this wheat has been found to be very poor. It is recommended that it would be better not to introduce it into western Canada for fear that it may become mixed with the high quality varieties which are now grown.

The factors considered in studying the milling have been loaf volume, color and quality of bread, color and texture of flour, shape of loaf, general appearance and the amount of water absorbed.

Western Canada is very proud of its reputation for wheat growing. The milling qualities of the wheat are pre-eminent. The emergency tariff rate of 35c per bushel has not succeeded in altogether preventing export to the United States, as Manitoba No. 1 hard is required in admixture for the making of the better grades of flour.

The Modern Sophocles

There are many people who excuse themselves from the little familiarities and kindnesses of life on the ground that they are not natural to them. These people say they are reserved by disposition, and cannot be free and easy in meeting other people. But we can learn to be genial and gentle, just as we can learn to row a boat, or throw stones, or write shorthand, or speak a new language.

That homeliness and unaffected simplicity of address that made Ruskin so approachable to child or man was the work of a long life's discipline. The strongest of men, he had made himself the servant of all, and, judged by his own standard, his greatness had lain just there.

What Ruskin learned we can learn. The greater the difficulties we have to surmount, the sweeter and more fragrant the gentleness we shall acquire.

GRAIN TRADE PROBE NOT TO CONTINUE.

Ottawa.—It is not the intention of the Government to continue the Royal Grain Inquiry Commission as at present constituted. This information was given to the House recently by Hon. J. A. Robb, Minister of Trade and Commerce, in answer to a question asked by Hon. H. H. Stevens, of Vancouver, that there might be a new commission appointed, which was indicated when Mr. Robb stated that there was an appropriation in the estimates for 1922-23 to defray the expenses of such a commission.

Dunnville, Ont.—Messrs. Martin Kohler & Sons have installed five stands of 9 x 24 double Allis rolls with the necessary purifiers, sifters and cleaners, etc., received for their new milling plant from the Canadian Allis-Chalmers, Limited, Stratford, Ont.

Charlottetown, P. E. I.—The damage suit for $25,000 brought in the Supreme Court here by the Charlottetown Milling Co., against the Canadian Fairbanks-Morse Company for alleged breach of contract in connection with the capacity of certain machinery supplied by the defendant, has been settled out of court, and the flour mill, which has been idle for a year, will resume operations again.

SEND US **YOUR** NAME

To be listed in the Free Milling Directory of Canadian Flour Mills, managers, superintendents, head and second millers, and engineers.

IF YOU WANT TO BE INCLUDED

We must have your name and other particulars on accompanying form. Kindly fill in and return promptly.

Superintendent .....

Head Miller .....

Second Miller .....

Name of Firm .....

Address .....

Daily Capacity .....

Power Used .....

WESTERN PROVINCES

WINNIPEG

WINNIPEG APRIL 15TH 1922

THE WINNIPEG MARKETS

Flour.—During the past two weeks so little has happened in the flour trade that it is difficult to see any feature in conditions, in fact there has been no feature. The general report is that trade is very dull, export business is showing a further decline in volume, and while domestic demand remains fair, it is not urgent and buyers are inclined to buy small quantities only. There has been no change in flour prices but wheat values have again been declining, and this has created a situation of little confidence in all business. As a result the output of the mills has been curtailed, and only a few are running above 50% of capacity, with the majority at less than that figure.

No export business of importance has developed, prices here being somewhat out of line, and from the first of the month even enquiries have been slack. Some small stocks of low grades are reported as having been worked to the Orient, via Vancouver, and some shipments have taken place to the British West Indies, but so far as Europe is concerned their buyers have been and are completely out of the market.

Present prices are: Top patents spring wheat flour $8.00 bbl., seconds $7.40, first clears $6.80, jute, mixed cars, 30-day terms, delivered at any point between Fort William and the western boundary of Manitoba. In 98-lb. cotton bags, prices are 20c. bbl. over the jute basis. Saskatchewan points take 10c under these prices, and from eastern Alberta to the Pacific Coast values rise progressively to $8.30 for top patents at Vancouver and like points. Vancouver Island takes $8.35 for top patents, and Prince Rupert $8.50.

Millfeed.—The domestic demand for millfeed continues strong throughout the west, while the mills have fair sized stocks on hand, which is largely due to the small export trade and the light shipments to the Pacific coast. There has been no change in prices. Bran is quoted at $22.00 per ton, and shorts at $24.00 in bags, delivered, Winnipeg territory.

Oatmeal.—The demand for rolled oats and oatmeal continues quiet and the market featureless. Prices remain unchanged, quotations being: Rolled oats, in 80-lb. cotton bags, $2.50 to $2.60; oatmeal, in 98-lb. cotton bags $3.00 to $3.20, delivered, Winnipeg territory.

Rye Products.—There has been no improvement in demand for rye products, and no change in prices since last report. Best patent flour is selling at $7.00 bbl., in 98-lb. bags; medium at $6.00; dark at $5.00, and rye meal at $5.00, delivered Winnipeg territory.

Linseed Products.—The market for these commodities is very dull at the present time, and outside of a fair local demand there is little doing, as shipments to Eastern Canada have practically stopped with the arrival of spring and new grass for the cattle. There was a recent reduction of $2.00 per ton in both meal and oil cake, quotations now being: Meal $50.00 and cake $48.00 per ton, in bags, mill point. Oil prices are unchanged, raw oil being quoted at $1.15 and boiled oil at $1.18 per gallon.

Flaxseed.—Prices continued steady during the past week although there has been some decline since last report caused by liquidation in the open markets. Crushers are not showing any urgency for spot seed, evidently having sufficient stocks for immediate needs, but on all declines become interested in deferred positions.

THE GRAIN MARKETS.

Unusually quiet and featureless markets have predominated during the past ten days, prices on the whole being very steady and moving in narrow limits. May wheat spreading only 4¼c. There has been nothing in the news to promote anything in the way of a bullish feeling and the general sentiment has been favorable towards lower prices. On March 30, May wheat was at the high of this period, closing on that day at $1.35¾, and from then on the values have worked irregularly lower, closing on April 5 at $1.31½, with little change since. Large shipments, causing congestion at the terminal elevators at the head of the lakes, have discouraged any active trading while an absence of export demand of any sort was a predominating influence in the price decline.

Oats—The oat market has been steady with very little feature. There has been considerable business going on quite recently for opening of navigation shipment, but it was undoubtedly worked on a very narrow margin of profit. This cereal is greatly influenced by the trend of the wheat market.

Barley—Conditions exactly the same as the oat market.

Flax—Dull and steady with light trade. Prices generally easier but very erratic.

Rye—Dull and featureless with a firm undertone. Very light trade.

SAY PACIFIC GRAIN EMBARGO NOT LIKELY TO BE PERMANENT.

Vancouver, B.C.—The embargo recently placed by the Canadian National Railway on the shipment of grain from prairie points to Vancouver is regarded in local business circles as a boost rather than a knock. It is figured that it will drive home to the powers that be the necessity of immediately setting to work to provide more grain-handling facilities in this port. The flow of grain from Alberta has been so pronounced and so steady this winter that it is now regarded as a permanent movement. This view was expressed by Mr. Robert McKee, chairman of the grain section of the Board of Trade. He added that he did not think the embargo would last more than thirty days at the outside and there was an immense amount of grain now on the rails between here and Alberta which would take at least that long to handle. A strong campaign will be inaugurated to secure the erection of more elevators before next fall.

LAKES HEAD ELEVATOR SPACE AMPLE.

Winnipeg.—That there is plenty of elevator space on the Canadian Pacific Railway tracks at the head of the lakes to take care of all loading done in the interior between now and the opening of navigation which will be about April 25, was the statement made recently by the Canadian Pacific Rail-

way officials. Approximately 285,000 bushels per day of coarse grains as well as wheat are being handled by the company. A percentage of the wheat loaded does not reach the head of the lakes, it being absorbed by flour mills at Winnipeg, Moose Jaw, Medicine Hat and Calgary. With the amount of space available in elevator "D" and other elevators on the Canadian Pacific tracks at Fort William company officials do not anticipate any trouble in this respect, they asserted.

TO TEST MILLING VALUES OF VARIOUS WHEAT GRADES

Regina.—The Saskatchewan Provincial authorities are seriously considering the project of arranging for exhaustive research regarding the milling values of various grades of wheat. The reason for considering this step is not only the decline in wheat prices but the depreciation in grade of Saskatchewan wheat due to weather conditions at and after harvest. The Minister of Agriculture reports that farmers have been getting as low as 50 cents per bushel for tough and sprouted grain. He thinks that some system of government testing of wheat which appears to be damaged is desirable so that farmers "may be able to sell by actual quality rather than by mere appearance."

Considerable work has been done both in Canada and the United States to ascertain the real milling value of tough and damp wheat. Such wheat is not as bright in appearance as other wheat and its appearance is against it. Investigators have held that repeated wettings and dryings of wheat do not injure the milling value of such grain, and therefore it should not be bought on appearance only, but on actual milling value.

But it is forgotten that wetting wheat artificially and drying it out thoroughly in a laboratory is hardly a fair duplication of what happens to wheat in the harvest field. It may never have a chance to get thoroughly dry; it did not in Saskatchewan this last season. It got wet several times before it had a chance to get thoroughly dry. Admitting that wet wheat is uninjured if it can be run through a dryer in good time, nevertheless the grain may have sprouted and chemical change gone on in the field before the dryer gets a chance at it.

TRADE OPPORTUNITIES

With a view to assisting the Canadian milling trade in the development of a permanent and profitable export business, "Canadian Milling & Grain Journal" publishes in each issue a selected list of trade opportunities, the investigation of which should prove of value. "Canadian Milling & Grain Journal" is taking special pains to ascertain the reliability of each opportunity presented and will gladly furnish any further information regarding them that may be desired.

THE EDITOR.

No. 246.—Messrs. Hugo Knoblauch Son & Company, Limited, 28 Baltic Street, Leith, Scotland, importers and buyers of wheat, oats, barley, and rye, are anxious to get in touch with exporting firms of Canada.

No. 247.—Messrs. John & James Todd & Sons, Limited, provision merchants, 61 Charlotte Street, Leith, Scotland, who import flour, cereal foods, oatmeal, etc., and who have hitherto bought through agents, are prepared to buy direct from Canadian importers, if to their advantage. Sellers should quote in British currency, c.i.f. or f.o.b. Canadian seaboard, cash against documents. When new brands of goods are offered, samples should be submitted.

No. 248.—Mr. B. Stilling Andersen, 4 Kronprincessejade, Copenhagen, Denmark, who have an outlet of 1,000 tons of flour per month, desire to represent a Canadian firm of flour exporters in Denmark and Sweden.

No. 249.—Messrs. Modiano & Navarro, 5 Drapers Gardens, Throgmorton Avenue, London, E. C. 2, who have connections throughout the Far East, are desirous of securing an agency for a reliable brand of Canadian flour, throughout Grecian Turkey.

BELGIAN FLAX SERIOUS COMPETITOR OF CANADIAN PRODUCT IN ENGLAND.

Belgian flax is seriously interfering with sales of Canadian flax in Great Britain, according to the report of the Canadian trade agent in Britain. Mr. N. S. McGibbons, of the Sales Flax Products Co., Toronto, reached London recently to conduct negotiations for the sale of the Canadian product on behalf of the Ontario growers. Belgian flax is being sold at low exchange rates and the outlook for the Canadian product is gloomy.

THE WESTERN MARKETS

The following report furnished by Messrs. Baird and Botterell, 103 Grain Exchange, Winnipeg, shows daily highest price levels from March 28, 1922, to April 12, 1922, inclusive.

	Mar. 28	Mar. 29	Mar. 30	Mar. 31	April 1	April 3	April 4	April 5	April 6	April 7	April 8	April 10	April 11	April 12
May Wheat	1.36½	1.35⅝	1.36⅜	1.35	1.33½	1.35⅛	1.35¼	1.33⅞	1.32	1.32¼	1.33⅝	1.35⅛	1.35	1.35¼
July Wheat	1.33⅞	1.33½	1.33¾	1.33	1.31⅜	1.33¼	1.32⅞	1.31⅞	1.31⅛	1.32	1.33	1.34⅛	1.34⅛	1.34½
May Flax	2.31	2.31½	2.30	1.29½	2.24½	2.27	2.26	2.22¼	2.24	2.23⅜	2.28	2.29⅞	2.32	2.31⅞
July Flax	2.30	2.30½	2.29	2.28	2.22¾	2.27	2.24¾	2.21¾	2.24	2.24½	2.28	2.30	2.31¾	2.32
May Rye	1.03½	1.03½	1.02⅞	1.02⅝	1.01	1.01½	1.01¾	1.00¼	1.00¼	1.00½	1.01½	1.02⅜	1.01¾	1.01⅞
July Rye	0.99½	0.99⅞	0.99⅞	0.99⅝	0.96¼	0.96¼	0.96⅛	0.95½	0.95¼	0.96	0.97½	0.98¼	0.98½	0.98½
May Barley	0.66¼	0.66½	0.66½	0.66¼	0.65⅝	0.66¼	0.66⅛	0.65⅝	0.65⅞	0.65⅜	0.65½	0.66¼	0.66¼	0.66½
July Barley	0.64¼	0.64½	0.64¼	0.64½	0.63⅛	0.64	0.64⅛	0.63⅝	0.63⅞	0.64¼	0.65⅛	0.65⅞	0.66	0.65⅞
May Oats	0.47¾	0.47⅜	0.47⅜	0.47⅛	0.46⅝	0.46⅞	0.46⅞	0.46¾	0.46⅞	0.46⅞	0.47½	0.48¼	0.48½	0.48⅜
July Oats	0.47⅝	0.47¼	0.47¼	0.47⅛	0.46⅞	0.46⅛	0.47⅛	0.47⅛	0.46⅞	0.46⅞	0.47⅛	0.48¼	0.48¼	0.48½

Foreign Flour and Grain News

A recent feature of the Canadian flour situation has been the increasing number of inquiries being received from England for spring wheat export patent flour for May shipment, coupled with the fact that prices bid promise the closing of considerable business. Reports from western points indicate that there has been a noticeable slackening in the activity of many of the mills, some of which are at present operating at but 50 per cent. capacity while others have cut down to even less.

There have been no changes in flour prices since last report, first patents selling in Montreal at $8.50, second patents at $8, and strong bakers at $7.80 per barrel, in jute, ex-track less the usual discount. Winter wheat flour conditions continue quiet and prices are unchanged at $6.75 per barrel, in second hand jute, smaller quantities selling at $7, and winter wheat patents at $7.50 to $7.75 per barrel. White corn flour is steady at $5 to $5.10, in jute, delivered.

The grain markets have been firm without any great variation in prices, and there are indications that an improved export demand will develop shortly.

While higher cables which have been received of late may lead to increased export business it is understood that private cables show but little interest. The higher public cables and decidedly stubborn markets in face of heavy supplies and a very ordinary demand would appear to denote an underlying strength which probably means that recent liquidation and short selling has been placed in strong hands.

DENMARK.—The crops are growing favorably under the influence of the mild weather now being experienced.

JUGO-SLAVIA.—Winter wheat has a very fine appearance, particularly in the new territories across the Danube. There have been occasional reports of flooding, but generally the land is drying quickly.

NORTH AFRICA.—Seasonable weather is being experienced. Winter wheat is looking well, although complaints of insect pests are rather numerous. Crop prospects have improved in Morocco.

GREAT BRITAIN.—There is no improvement to note in the position on spot, both home milled and foreign being in very slow demand from bakers. English milled has been reduced 2s. (0.45) recently, but this has had no influence in stimulating trade. Foreign flour is slow, with quotations unchanged on the period. Foreign offers have advanced an occasional 6d. (0.11) for shipment, but there is very little doing in forward positions.

ARGENTINE.—The International Institute of Agriculture (Rome) has received the following data relative to the production of wheat, oats, and linseed in Argentina during 1921-22:—

The production of wheat is estimated at 92,925,-200 centals against 101,853,900 in 1920-21 and 102,-522,700 centals, the average of the preceding five years; showing a decrease of 8.8 per cent and 9.4 per cent respectively.

The production of oats is estimated at 10,551,-400 centals, being equal to 69.3 per cent of that of 1920-21 and 61.8 per cent of the previous five years' average.

For linseed, the production in 1921-22 amounts to 17,764,900 centals, or 62.9 per cent of that during 1920-21 and 120.5 per cent of the five years' average.

RUSSIA.—Russia's total grain yield for 1922 will be only about one-half the average before the war.

ROUMANIA.—The fine weather recently experienced has enabled ploughing to commence throughout the country. It is reported that farmers intend to put an extensive acreage under spring grain this year in order to compensate the restricted Winter sowings.

INDIA.—Early west winds prematurely ripened the crops in the north-east of the United Provinces and the yield of late planted grain is expected to be seriously affected. With this exception prospects for a good outturn are maintained. The second government forecast of the wheat acreage gives the total for all India as 28,405,000 acres, compared with 28,012,000 the previous estimate and 24,945,000 the final of last season.

NEW ZEALAND.—This year's wheat crop in New Zealand is being controlled by the Government, who have fixed buying prices at 5/8 ($1.25) to 6/5 ($1.40) per bushel. Supplies to millers are being allocated.

FRANCE.—Mild showery weather has been experienced recently. Spring sowing is proceeding actively throughout the country, and it is expected there will be some increase in the acreage. The condition of the Winter crops on February 1, as reported by the Ministry of Agriculture, was slightly higher than the condition on January 1st, but still well below the condition on the corresponding date of last year. Since February 1st, however, the weather has been exceptionally favorable, and the opinion is generally held that the condition of the plants has improved considerably.

ITALY.—After a recent spell of fine, warm weather, further rains have fallen; autumn-sown wheat promises well, and Spring sowing is being carried out under favorable conditions.

HUNGARY.—It is feared that the crops suffered considerably from the recent frosts, but it is too early yet to ascertain the extent of the damage.

AUSTRIA.—The outlook for the crops is considered quite favorable.

MALTESE FLOUR IMPORTS.

A Government Notice authorizes the Superintendent of Public Health to allow the importation and sale of flour containing less than 35 per cent. by weight of wet gluten, whenever it can be shown by the importer or seller, as the case may be, to the satisfaction of the Superintendent, that the low proportion of gluten is inherent to the nature of the wheat from which the flour is extracted, and is not an index of deterioration, staleness, bad quality, or unsatisfactory milling.

The Elevator Operator

SECURITY AGAINST FIRE MOST IMPORTANT CONSIDERATION IN NEW ELEVATOR CONSTRUCTION.

Elevator owners and operators throughout the Dominion who are contemplating the erection of new or additions to existing houses this year will be beginning to think about the material, capacity, style of construction, and equipment they will require for their projects.

As to the type of construction, whether fireproof or wood, the selection may depend on the amount of money available. But the price paid is not the actual cost in any kind of a plant. The actual cost appears after operation is under way. If the plant has been badly designed or poorly built and the equipment improperly installed, the expense of replacements, repairs, and extra labor necessitated by these inconvenient defects will soon increase the first cost.

Cribbed elevators have been built for fifty years and are still being built, but their day is nearly done. Just as the gasoline or oil engine and the electric motor have entirely replaced the old blind horse and sweep, so fireproof elevators are fast replacing the wooden plants. It is doubtful wisdom to invest much money in a working plant which may be destroyed any hour with a consequent loss of business and impairment of capital.

Conservation of food is a vital matter, especially in these days when people are dying of starvation in so many countries, not by thousands but by millions. It is more than probable that public sentiment will soon crystalize into statutes making it unlawful to store or handle food products in combustible structures.

Reinforced Concrete Most Satisfactory.

Of the materials used in fireproof construction, brick, tile, and steel have all been tried and found inferior in strength, fire resistance, water and weather resistance, water and weather proof qualities. Reinforced concrete excels all materials in ease of manipulation to secure the desired arrangements of bins and working spaces. Concrete is not only fireproof but is watertight, rat proof and sanitary, all important points in grain storage. Its most important structural quality is the fact that it actually grows stronger with age, thus eliminating depreciation.

The steel reinforcement in concrete is absolutely protected against corrosion or slippage, whereas in brick or tile work, the rods, wires or bands are only protected by thin mortar joints and in most cases it will be found that this mortar is not a pure Portland cement mortar, but that lime has been used to make it work easier.

The fact that for the past ten years, all the large terminal elevators, storage tanks and the frames and floors of mills and warehouses have been built of reinforced concrete should be sufficient evidence of the superiority of this material.

As to the comparative cost of concrete and wood, while the first cost of the concrete elevator will ordinarily be greater than the usual wooden building, where there is a large amount of equipment and elaborate and expensive treatment in finish and trim in elevator and office in the wooden elevator, the difference in cost is not so great. It is questionable if so much costly machinery should be housed in an inflammable structure or that it is advisable to go to so much expense for finish in a wooden elevator that may soon burn.

The operating costs with respect to insurance, depreciation, upkeep, labor, wastage of grain, safety and comfort of employees, are so much less than in the wood elevator that the savings will not only pay big interest, but will refund the higher cost in a short term of years and thereafter constitute a profit.

The concrete elevator is a permanent structure and must be designed, not only for present requirements, but with some thought for future needs. Concrete elevators are built high for reasons of economy in construction and as a consequence they usually overtop all other buildings and may be seen for miles. It is a crime to build a monstrosity which will be an eyesore for all time. Is it wise for an elevator company, in order to save a few thousand dollars, to decide on an elevator with cheapness as the first consideration rather than workability and appearance? Such a decision will be a lasting stigma on the good sense and taste of those responsible for the erection.

Many builders, in order to make the lowest possible price, sacrifice appearance, convenience and efficiency in bin arrangement. In many cases the machinery installed has been done by another contractor who had to take the building as he found it. Practical elevator men can readily understand that the result was anything but satisfactory.

AMERICAN FIRMS LEASE GRAIN STORAGE FACILITIES AT LAKES HEAD.

Fort William.—The Chesapeake Milling and Export Company, of Chicago, has negotiated and signed a lease for special bins in the Canadian Pacific Railway Company's elevator "D," for storage purposes. This company is a keen competitor for grain and pays a premium for grain to the western producers and has in mind the acquisition of a line of country elevators in the prairie provinces.

At the same time Mr. Wm. C. Renstrom, representative of the Rosenbaum brothers, grain dealers, of Chicago, is looking over the ground in Fort William and purposes, if possible, to acquire either by building, purchase or lease, elevator space here with the intention of extending the business of the company to the head of the lakes.

The advent at the Canadian head of navigation of these strong American exporting companies augurs further expansion in the grain interests located at Fort William.

Every crank seems to be getting the idea that Providence created him a savior of the race. He is saving everybody but himself, and he is usually the fool that needs salvation most.

The Elevator Operator

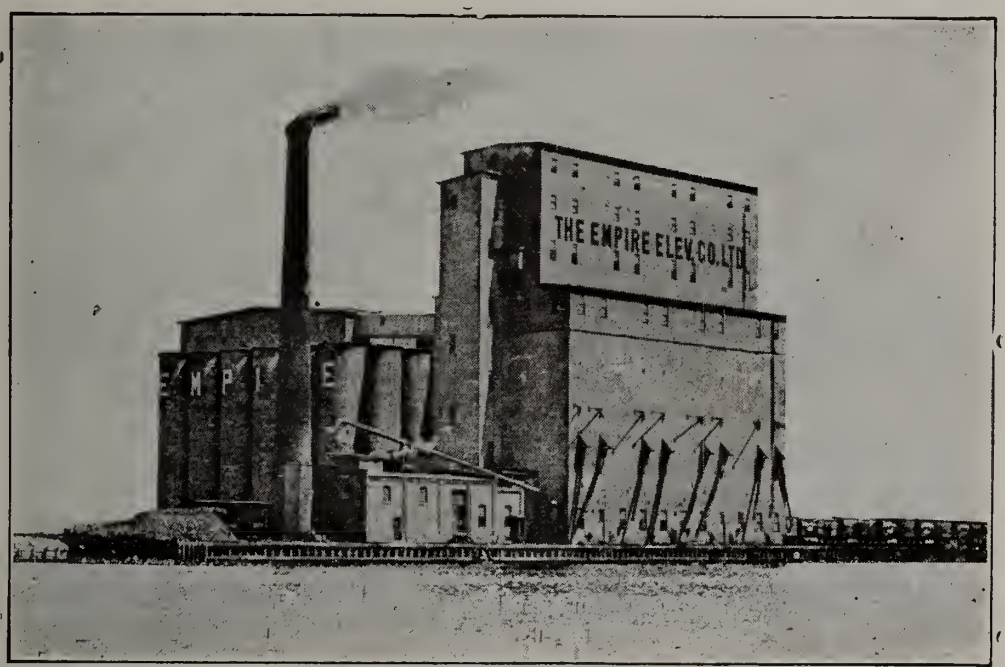
CANADA'S GRAIN HANDLING SYSTEM TO BE DUPLICATED IN SOUTH AFRICA.

According to South African authorities the installation of the new up-to-date elevator system, the big contract for which was secured by Mr. A. W. Menkins, a Canadian, who is now on his way to South Africa, with a staff of technical and other assistants to commence operations, will revolutionize the handling of grain in the Union.

At the present time the grain trade of the Union exceeds 10,000,000 sacks per annum, and the whole of it is stored and transported in bags, which necessitates manual handling each time a movement is made. Under the best circumstances a parcel for the English market will be handled seven times, and often more.

In South Africa it is not proposed that the Railway Administration, which will undertake the management of the elevator system, should buy the grain from the growers. On delivering their crops to the country stations the growers will be given warehouse receipts, which will be recognized by the banks as first-class security for loans. It will then rest with the producer to do as he pleases with his receipt; he can sell it at once, raise an advance on it, or, if he has belief in a rising market, hold it a while and then sell it to the best advantage.

A not inconsiderable saving will be that on bags, which now work out at about a shilling each, as against 8d. before the war. It is also worthy of note that the elevator storage bins render the grain practically immune from dangers through weather, insects, or rats, and, moreover, that the holder of the



The 1,750,000 bushel house of the Em pire Elevator Co. at Fort William, Ont.

The introduction of the new system will substitute cheap, quick, and safe mechanical methods for the less satisfactory one of hand labor. Instead of bagging his grain on the farm and loading it in that way into trucks at the nearest siding, the grower can retain his bags for future use, or can even bring his produce to the country elevator in bulk. There it is weighed, graded, and stored in the big bins, from which it is poured into special railway vans; on their arrival at the coastal terminus these trucks come under the port elevator, their loads are sucked up into the storage bins, and there they remain until they can be shot out into the hold of the homeward-bound steamer. On reaching its European destination the ship can rely on discharge by an elevator, unless it be bound to a small port, so that rapid and cheap handling have been employed throughout. What the saving means is well illustrated by the fact that a ship that takes a full week to load with bagged grain can be supplied by an elevator with its cargo in a day.

receipt is covered against all risks while his produce is in the hands of the elevator authorities or in transit between their stations.

It is a foregone conclusion that the enterprise of the South African Government will be repaid many-fold within a short time, and that the grain exports will soon reflect the altered conditions of transport.

Cheaper Transport.

The provision of these elevators will, undoubtedly, prove of great value to the grain-growers of South Africa. At present all the grain is handled in sacks, adding considerably to the cost. With prices at their present level, the reduction of all charges in connection with the transport of grain from the farms to the coast to the lowest possible level has become imperative, and the completion of the works for which tenders have been let should place South African grain growers in a very favorable position to compete with their rivals in other countries by the time the 1924-5 harvest is ready for export.

Some Important Facts Regarding Roll Grinding and Corrugating

Does the average practical miller ever stop to think just how much money he is losing by operating his roller mill with dull rolls?

In the first place, when the roll corrugations are worn down smooth, the miller, in order to get capacity from the mill, runs the rolls up close which results in them getting hot and in a loss of power. This loss in power is a very important item in either a steam, gasoline or motor driven mill. The most important thing, however, in addition to this, is the effect that the dull rolls have on the quality of the flour and on the capacity of the equipment.

In order that the miller may know exactly what constitutes reliable roll grinding and corrugating, the following observations from a practical miller of many years experience will be of interest:

Every roll, the corrugations of which are worn smooth, must be reground before being recorrugated to give perfect satisfaction. A corrugated roll which has been ground down smooth on the grinding machine no longer has the same diameter and circumference which it had before being machined, which is evident. This necessitates a smaller number of teeth on the total roll surface, the number of teeth per inch remaining the same.

Grinding Out Old Corrugations.

It is seen, therefore, that unless the old corrugations are ground out, if an attempt were made to machine over the old corrugations and endeavor to get a sharp tooth both bottom and top, at the end of the work the new teeth would not coincide due to the fact that the diameter of the roll is smaller than what it was on the original cut. In other words, there must be a smaller number of teeth on this second operation than what there was on the first corrugation, due to the difference in circumference which is impossible from a corrugating standpoint.

The grinding of a roll determines to a great extent whether the work of corrugating will be a success or not. The dull roll is placed in the grinder which has special grades of carborundum wheels on the sides of the machine. An automatic device rotates the roll in its bearings and at the same time causes the wheels to travel along the surface of the roll. The journals and the position of the wheels with respect to the roll are adjusted so that the roll is absolutely true when finished. Micrometer measurements taken on rolls after grinding do not show over one one-thousandth inch variation in diameter to twenty-four inches in length. The importance of having a roll ground in its own journals is evident.

Whatever accurate work is required to properly grind rolls, it is necessary to adhere to correct corrugating. The spiral used on flour mill rolls varies considerably with the wheat and with the opinion of the miller. As a general rule, the spiral is about one and one quarter inch to the foot for ordinary wheat rolls. In placing a spiral on a roll a device is used consisting of a sliding shoe and adjustable angular slot which rotates the roll slowly in the bearings of the machine as the cutting tool passes over the work. The slot and the shoe being adjustable, any particular variation of the customers roll spiral can be duplicated. The cutting tool advances automatically equal distances at each stroke which insures an even and perfectly formed tooth.

A brief outline of the principal forms of teeth is as follows:

The forms of teeth shown in figures 1 and 3 are rarely if ever used at the present time and have been succeeded by later types shown in figures 2 and 4

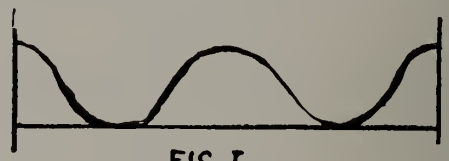


FIG. 1.
STEVENS

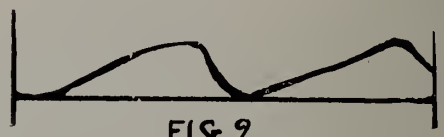


FIG. 2.
NORTH-WEST'N

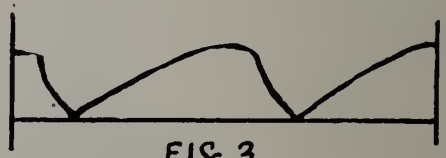


FIG. 3.
JEWEL

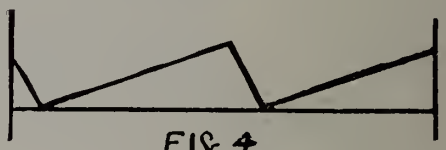


FIG. 4.
DAWSON

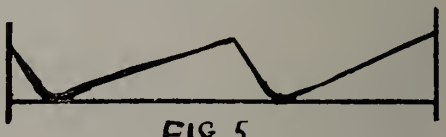


FIG. 5.
PHILADELPHIA

or slight modifications of same. For hard and close grained it was found advisable to develop a tooth for rolls illustrated in figure 2. This form is sometimes called the Northwestern cut and is used in western mills or eastern mills buying western wheat and blending it with other grades for grinding. The Northwestern cut has in a number of cases been supplanted by the regular Dawson cut which keeps its edge longer and when worn slightly has practically the same effect as a rounded tooth form.

A modification of the Dawson cut, Fig. 5, with a sharp cutting edge and rounded bottom has been found advantageous in some localities where a great deal of trouble has been experienced with garlic.

Elevator, Mill & Personal Notes

Yorkton, Sask.—The 30,000 bushel elevator of the N. Bawlf Grain Co., Ltd., at Orcadia, the first siding west of this point, was totally destroyed by fire recently. The house was built about 14 years ago, and at the time of the fire was loaded to capacity with grain, in great part wheat.

This is the second elevator burned at Orcadia within the past few months, the Northern Elevator Co.'s house there being totally destroyed last Christmas morning with a loss of 35,000 bushels of grain.

Toronto.—The appeal of the Dominion Millers' Association to the Governor-in-Council at Ottawa, against the judgment of the Board of Railway Commissioners, refusing to grant the same arrangement on flour over ex-lake wheat for export as they give on all-rail flour over wheat for export, will be heard by the Privy Council at Ottawa, on April 19.

Toronto.—The N. M. Patterson Company, Winnipeg and Fort William, which has had an office in the Royal Bank Building, has closed out its representation in Toronto. The office has been in charge of Mr. S. E. Coolidge, who is just now taking a trip through the east for the company.

Toronto.—The Wenger Milling Company, Limited, has been chartered to do business as grain merchants, millers, etc. The head office of the company is at Ayton, in Grey County, Ontario, and the capital stock is $75,000. The provisional directors are Lee Cameron Wenger, Janet Wenger, E. B. Wenger, Robert Wenger and Dulcie Wenger.

Toronto.—The Maple Leaf Milling Company, Ltd., have declared dividends for the quarter ending April 3rd, 1922, of one and three-quarter per cent. on preferred stock, and three per cent. on common stock, payable April 18th, to shareholders of record at close of business, April 3.

OBITUARY

Toronto.—The death took place in Toronto recently of Mr. David Gorman, aged 74, who for 40 years was connected with the grain trade of Toronto and district. Death resulted from heart disease. Since 1910 when he retired from his position as manager of the firm of Messrs. J. Goodall & Co., the late Mr. Gorman had lived in retirement. Born in Ireland, County of Sligo, deceased came to Toronto while a comparatively young man, to engage in the grain business, and had lived in Toronto for many years.

Toronto.—The Toronto milling trade regretted to learn of the recent tragic death in Ayr, Ont., of Mr. W. A. Reid, who took his own life by hanging himself with a rope in the sawmill of the W. I. Reid Lumber Company. Deceased was head miller at the Goldie Flour Mills in Ayr for a number of years and was well and favorably known throughout the Ontario milling trade.

Toronto.—The death took place at St. Catharines recently of Mr. John Palmer, an old and highly esteemed employee of the Maple Leaf Milling Company.

Mr. J. B. Urquhart, of St. John's, Nfld., was introduced on 'Change in Montreal recently by Mr. W. B. Wood, president and general manager of the Dominion Flour Mills Co., Ltd.

Mr. C. R. Hunt, of Hunt Bros. Mill, London, Ont., was a recent visitor in Montreal.

Mr. Geo. A. McDonald, sales manager of the Quaker Oats Co., Peterboro, Ont., was a recent visitor in Montreal.

Mr. C. B. Watts, secretary and manager of the Dominion Millers' Association, Toronto, was introduced on 'Change in Montreal recently by Mr. W. H. D. Miller, grain merchant, 42 St. Sacrament St.

Mr. R. A. Thompson, of Lynden, Ont., president of the Dominion Millers' Association, on the occasion of a recent visit to Montreal, was introduced on 'Change by Mr. F. C. Cornell, secretary of the Canadian National Millers' Association.

Mr. W. C. Omand, flour and grain dealer, Royal Bank Building, Toronto, is on a business trip to Edmonton.

Mr. L. H. Rice, of the St. Mary's Milling Company, and **Mr. C. B. Watts,** secretary of the Dominion Millers' Association, appeared before the Agricultural Committee at Ottawa, recently, to give evidence on the proposal to re-establish the Wheat Board.

Mr. W. H. C. Dibb, formerly with Messrs. C. R. Vannatter & Co., Dominion Bank Building, Toronto, and now of Dibb, Mahon & Co., Board of Trade Building, Montreal, was a recent visitor in Toronto.

Mr. J. W. McNutt, proprietor of the Brampton Baking Co., was a recent visitor to the head office of the Maple Leaf Milling Company. Mr. McNutt is now engaged in putting up a commodious warehouse for the storage of flour and intends to handle flour and feed when the new building is completed.

Mr. J. S. Barker is back at his desk in the office of the Maple Leaf Milling Company after a period of illness.

NITROGEN IN WHEAT VARIES BUT LITTLE.

The researches of two French scientists, Rousseau and Sirot, have shown that the quality of soluble nitrogenous substances contained in good flour is very nearly constant, and by this means the bread-making qualities of flour can be judged. Since stating this conclusion, they have analyzed wheat in all shapes of development including grain soaked by rain, to the time of germination.

These analyses showed that the total nitrogen in the wheat varies but little; but its condition as to solubility differs greatly. At first, 40 per cent of the nitrogen is soluble, but as the grain ripens the percentage of solubility decreases until it reaches 9 or 10 per cent. Then it increases until about a fortnight before harvest, when it reaches about 14 per cent, which seems to be the stable condition of equilibrium when the proportion of soluble nitrogen is just right to make good flour. When the wheat begins to germinate, the percentage of soluble nitrogen increases rapidly to about 26 in the seed, and 52 per cent in the germ itself.

THE PRACTICAL MILLER

THE QUALITY TEST FOR HEAT DAMAGED WHEAT.

The prevailing method of determining heat-damage in wheat, cannot be regarded as an exact science. In fact, any condition or quality which must be determined "by the eye," is likely to be given varying interpretations. This is especially true of heat-damage in wheat, where there are so many "degrees" and variations.

Wheat and wheat flour contain "gluten." Gluten in turn consists of two substances, namely glutenin and gliadin. Both of these substances are necessary for the formation of gluten and are not found in other cereal grains or their products. When flour is mixed with water, and a dough is formed, it is gliadin that binds the mass together and makes the dough tough and coherent. Glutenin prevents the gliadin from being washed away. Heating wheat or flour to a sufficiently high temperature destroys the adhesive or dough-making quality of the gluten. Quoting Jago by way of explanation regarding the effect of heat upon gluten: "* * * on warming flour for from 48 to 96 hours, keeping the temperature below 60 degrees C., * * * and then adding a little unwarmed flour and extracting gluten from the mixture, no gluten is obtained beyond that present in the added flour, showing * * * that the gluten-forming substance had suffered coagulation."

This test may be used to detect wheat flour mixed with flours made from other cereals, etc. A small amount of the flour to be tested (1 to 2 milligrams) is placed on a piece of clear glass (microscope slide.) Add one drop of a solution made up as follows—1000 cc of distilled water to which 0.2 gram of water-soluble eosin has been added. Mix the flour and liquid with a second piece of glass (use a cover glass if available.) Hold the upper glass at an angle until the flour and liquid are well mixed and a pasty mass is formed. Release the upper glass and rub back and forth, exerting a slight pressure until the gluten in the paste between the two glasses has been collected into oblong masses or "rolls."

"Wheat flour, or other flours containing it, yields by this treatment a copious amount of gluten, which absorbs the eosin with avidity, taking on a carmine color. Rye and corn flour yield only a trace of gluten, * * *"

(The foregoing quotation is from Methods of Analysis of Cereal Foods compiled by B. R. Jacobs.)

Rolls Can be Plainly Seen.

The oblong masses or "rolls" described above, are highly colored by the eosin from the solution, and can be plainly seen with the naked eye, when held over a sheet of white paper.

Note—For a more detailed description of the "Bamihl test for gluten" consult, Food Inspection and Analysis, by Leach, 3rd Edition, page 322.

From the facts cited above, one would naturally conclude:

1st. That heat-damage may destroy the adhesive or dough-making quality of the gluten contained in the individual kernel of wheat. Experimental tests on unmistakably heat-damaged kernels confirmed this conclusion.

2nd. That damage from heat which has not been accompanied by the destruction of the adhesive or dough-making qualities of gluten in individual kernels of wheat, should not be considered as heat-damage.

3rd. That the gluten in sound kernels of wheat would respond to the "Bamihl test for gluten" in the same manner as that in wheat flour. Such has been found to be true.

4th. That the gluten from heat-damaged kernels of wheat would not form gluten masses or "rolls" when subjected to the "Bamihl Test for Gluten." This has been proven by tests.

5th. That the gluten in heat-damaged kernels would absorb the eosin, but on account of its non-coherence, the appearance of the gluten would be that of many tiny specks of highly colored material scattered throughout the pasty mass. This statement has been verified by numerous tests.

6th. That many kernels which have been more or less discolored would respond in the same manner as sound kernels, while others would respond as has been described under 4 and 5. Tests have confirmed these surmises.

Highly Colored Gluten Masses.

Make a few tests on wheat flour first, then try rye flour, corn flour, or pure buckwheat flour. Note carefully the development and appearance of the highly colored gluten masses or "rolls" in wheat flour.

Select several sound kernels, a few distinctly heat-damaged kernels and some others that are only slightly discolored. Proceed as follows, taking one kernel at a time—

Cut off the germ and brush ends of the kernel. Remove the bran from the central portion of the kernel using a sharp knife or razor. Grind the remainder of the kernel in a steel or porcelain mortar to a fine powder or "flour." Transfer the "flour" to a piece of glass (rejecting any bran particles that may be present) and add one drop of the eosin solution and mix into a paste as described above.

The value of the test is mainly in determining what constitutes heat-damage in wheat. The average inspector will not be called upon to make this test in actual grading work, but it would be a good thing for him to know how to test "doubtful" kernels.

While this test is strictly a qualitative test, investigations not yet conclusive, point to the possibility of developing simple quantitative tests that can be used by any chemist in determining heat-damage in wheat.

If a miller does not look forward he is looking backward. Efficiency in milling is quite as essential now as it ever was. Keep your mill fit and efficient. Throw out the old machine and the equipment that has outlived its usefulness. High costs of machinery have been cut substantially and the incentive to wait and let the plant run down should no longer exist.

THE PRACTICAL MILLER

FLOUR AGEING METHODS COMPARED.

It is a well known fact that flour when fresh milled is never in condition for its best bread results. It improves in its baking quality only as it increases in its hydrogen concentration, and reaches its maximum efficiency when its concentration or acidity has increased sufficiently to produce the proper physical effect upon the gluten. Or in other words, acidity is the active element that controls the baking quality of any flour.

The point of highest efficiency of the hydrogen ion concentration is not materially different in different flours. The quantity of chlorine gas to be used in the treatment of flour to produce the concentration for its highest efficiency in baking, will vary somewhat in different flours. High grade Patents will generally require a little less gas to develop them to the required point than the Clears or Low Grades. The reason for this doubtless is that the hydrogen ion concentration of the best Patent flours is naturally higher than on the lower grades. Generally, the lower grades require heavier treatment to develop the same degree of concentration.

Owing to this fact it is not possible to give an arbitrary quantity of chlorine to be applied to different flours if these flours are to be brought to their points of maximum efficiency.

Neither the gluten content nor the character of the grain as to density determine the exact amount of chlorine gas to be applied to develop any flour to its best baking point. Each particular kind of flour, either from different wheats or the different grades from the same wheats, should have sufficient gas applied to develop at once the degree of hydrogen ion concentration which all flours require for efficient service.

Flour will acquire this concentration in storage, but when it has reached its maximum efficiency it will begin to deteriorate with a higher concentration. The advantage in securing the desired results with treatment with chlorine is that the hydrogen ion concentration is added as the flour is milled and is stabilized at that point; therefore, it does not rapidly increase in this concentration as in storage.

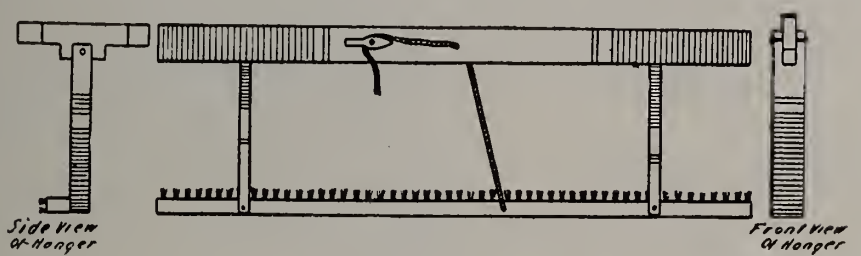
TESTED VALUE OF BREAD IMPROVERS.

As a result of recent investigations into the value or lack of value of various bread improvers, Dr. C. E. Saunders, B.A., Ph.D., LL.D., the Dominion Cerealist in his researches gives some general conclusions in regard to each of the commoner articles used in baking powders, in self-rising flour and separately by bakers. Some of these conclusions are entirely at variance with popular belief.

To begin with, it appears a commercial form of calcium phosphate caused a noticeable improvement in the bread when added in the proportion of 0.4 per cent of the dry flour. Sodium phosphate seemed to have little effect.

Cream of tartar (potassium bitartrate) used in the proportion of 0.2 per cent, had no particular effect on quality. On the other hand ammonia chloride (sal ammoniac) was found to improve the loaf even when used in extremely small quantities. Sodium bicarbonate, or baking soda, used in the proportion of 0.2 per cent or even double that amount, caused some improvement but produced a somewhat darker crust.

Alum was found to be a really objectionable substance to use in bread, although in some cases it seemed to improve the appearance of the loaf. But in amounts less than 0.4 per cent it seemed to have no effect. Most surprising of all is Dr. Saunders' observation in regard to calcium sulphate, or "plaster of Paris." He says that while he would not recommend this substance, he would prefer to eat good bread containing minute traces of it, than to eat bread free from it but of poor quality.



Illustrating Principle of Adjustable Reel Brush.

AN ADJUSTABLE REEL BRUSH.

An adjustable brush for reels can be made with two hangers fastened one at each end of the brush and the hinged ends fastened to the top of reel inside as shown in the above sketch.

The hangers are made by cutting a slot to slip over the block that is screwed to top of inside of reel, with a bolt run through to hold it. A rope fastened to brush will hold the brush at any desired contact with cloth. In case it is not needed at times it can be raised clear of the cloth.

COMPARING FLOURS BY ASH CONTENT.

The ash content of flour gives a ready means of comparing flours; but it is not an infallible test of relative flour quality. For one reason, the ash is contained throughout the entire wheat kernel and is not confined to the bran and its immediate vicinity. The percentage of ash in flour is really the percentage of mineral matter. When the percentage of ash in flour is unduly large, the inference is fair that the excess comes from the bran; but there is ash even in the centre of the kernel.

THE PRACTICAL MILLER

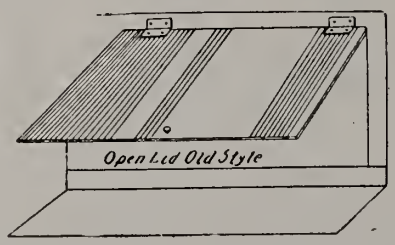
USE OF WATER IN BAKING TESTS.

In all experimental baking tests in mill laboratories, it is of the utmost importance to add the correct amount of water to the dough, as the behaviour varies rather radically according to the degree of slackness. Different flours vary so much in character that it is impossible in many cases to judge accurately how much water should be added until after an actual baking trial has been made. Some flours will take up enough water, without becoming sticky, to make a loaf of poor, flat shape; while others (Durum wheats very often) become exceedingly sticky and almost impossible to handle while still very tight. These facts show the necessity for using baking pans with low sides, so that the dough may clearly show its character, and for repeating the bakings so that the best amount of water for each kind of flour may be accurately determined.

Experiments in which varying amounts of water were added to the same flour showed that with more water the fermentation is more rapid, and the volume of the loaf is greater. An excess of water however, spoils the form of the upper crust which becomes too flat.

CHANGING LID ON ROLL FEEDER.

Here is just one of those little things that help toward more efficient work. Many old style roll feeders have the lids hinged at the top and every time they are opened, the dust that has accumu-



lated falls over the roll. If the lid is changed to hinge on the bottom and open from the top, the dust will stay inside the housing and prevent littering the roll.

CO-ORDINATION AND GOOD MILLING

Flour milling is so largely a matter of co-ordination and adjustment of many parts and details that it is idle to discuss whether this or that machine is the more valuable, or this or that process the more essential. But for that very reason, this fact that milling depends on co-ordination and adjustment of parts and details, one thing has precedence, for there will be no co-ordination without it. This is the diagram or flow of the mill. As an old milling engineer used to say: "If the milling system is essentially wrong, additional machinery will not help it. The reduction and separation must be correct. Then if there is anything wrong in the machinery, or its amount, it can be corrected." He said this referring to the need of a flow.

Sometimes there is much that is wrong in the mill's equipment, but oftener only minor changes are necessary to convert mediocrity into success; perhaps a change of a cloth or two or of a couple of spouts. There are mill doctors who can diagnose the case of a mill, and tell whether it is suffering from a serious ailment, a deficiency complaint or some obstruction in the system. When these physicians are competent and conscientious, their counsel may mean the difference between sickness and health; between lassitude and robust activity.

THE PLACING OF SIEVE PURIFIERS.

An error in mill management amounting to downright neglect is the placing of a sieve purifier, especially of the open type, or an aspirator in close proximity to some dust producing machine or leaky blow spouts, open grain or feed bins, or again near windows in which dust and smoke from the outside enters. The obvious thing to do is to remove the cause by stopping the leaks in blow spouts, covering the bins tightly, and placing a straining screen in the window if it is required to be open. This screen to be made of light flannel cloth. An alternative is to place a straining screen of thin light flannel in the side panels of machine when the air enters, or in case of the air entering below the sieve through the baffled hoppering screen filter. These filter screens should be made of light and loosely woven flannel. They can be removed periodically and brushed. These screens will strain the air, and permit sufficient air to enter the machine for the purpose.

Where the machines are placed on a floor where the conditions are such that the air is reasonably clean or pure, these precautions are not so necessary, though the sweeping of floors or dusting off of machines should be so done as to make as little dust as possible.

PROPER CARE OF FRICTION CLUTCHES.

The proper care of friction clutches is one of the most important items in the operation of any type of machinery. All first class friction clutches have adjustments that must be looked after with care. If you do not understand how to adjust your clutch, get the information, and keep the clutch adjusted until all parts are doing their share of work.

There are always two or more oil holes on any friction clutch, and these must be kept oiled regularly. It is never necessary to tie a lever of a friction clutch into gear if the adjustment is right. Never let one or two arms do all the work. Have the lever plumb when half way out of gear so that it will have a tendency to stay in or out when thrown to one side of the full stroke. Nine-tenths of friction clutch trouble is in lack of oil, and improper adjustments.

The lever should be set so that there is no strain up or down. In fact there should be no strain on the lever any way except to throw the clutch in and out of gear. Most people think when the clutch is out of gear it requires no oil; but that is when it acts as a bearing and does require oil. The collar requires oil at all times.

THE PRACTICAL MILLER

THE EFFECTS OF STEM RUST ON MILLING VALUE OF WHEAT.

Stem rust, as would be expected from its effect on the wheat plant, seriously affects the milling quality of the grain. These effects are not uniform, of course, but in a general way they increase the fiber and ash largely. This is because the kernels become shriveled. And these shrunken light weight grains, as is generally the case, show a larger percentage of protein and a smaller percentage of starch than normal wheat growing in the same field. Sometimes the crude fiber is nearly twice normal. The increase in protein content may be so large as to be very abnormal; and curiously enough, instances have been known where the rusted wheat showed less than normal protein.

Naturally, rusted wheat produces considerably less flour and more bran than normal wheat. The bran may be as high as 30 per cent. and the flour as low as 50 per cent. The patent flour contains more ash than a normal sample, and while its absorption capacity may be larger than flour made from sound wheat, the loaf will be smaller and its color and general character inferior. While its protein content would be larger than that of the normal loaf, and accordingly lose little in nutrition, the loaf is not attractive. So, rusted wheat should be used with discretion. There is nothing deleterious about it, any more than other wheat that has shriveled; but too large a percentage of it in the wheat that goes to the first break is sure to make itself apparent in the general characteristics of the flour and bread.

FRESH AIR IN THE MILL.

One of the first essentials of the air of a flour mill is purity, and this is one of the most difficult things to obtain. Although not always apparent to the human eye, the air is loaded with impurities. This might not be realized unless a thorough inspection of a mill is conducted. At no time is it more difficult to mill with good results than in foggy weather, and in fog there is more than the usual amount of impurities. One phase of milling which requires pure air more than another is purification, where the use of tainted air over and over again is detrimental to good results. It is at the purifier that one is able to see the effects of the impurities of the air. If a mill is situated in an industrial district, then more often than not the upper parts of the expansion chambers of purifiers will be found to be covered with sooty dust. Again, if the purifier sieve is closely examined it will be found to be dirty and the meshes to contain small particles of dark matter which at no time have been connected with any form of middlings. Some of these particles must find their way into the flour sack, and the result can only mean unsatisfactory color. Surely the purifier has enough to do in contending with the impurities released in grinding without having a further load placed upon its back. Plenty of air space and purity of air should always prevail on the purifier floor.—Milling, Liverpool.

THE ABSORPTION CAPACITY OF FLOUR.

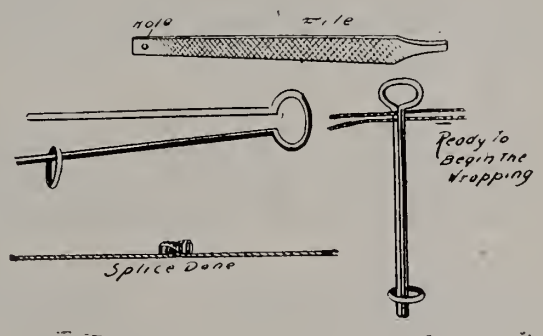
At a recent bakers' convention a speaker gave the conclusions he had reached on a number of important points after an experience of 35 years in the business. In selecting a high patent flour, which he says he would make 75 per cent. of his blend, he would judge it not absolutely by the amount of gluten nor its absorbing quality but rather on the quality of the gluten and flavor and aroma of the finished loaf.

In regard to absorption, he said, that if a 64 per cent. absorption is used for one flour and 58 for another, the true test is how much moisture the crumb has the next day. He was inclined to think the question of absorption is degenerating into a harmful stage. Breads made with exceptionally high moisture content are generally flat tasting; and the grain of this kind of bread is naturally also influenced by the exceptional moisture content.

A HANDY WIRE SPLICER.

If you need a wire splicer but not so often as to warrant buying one, you can make one that answers all purposes as follows:

Heat all over an eight-inch flat file to take most of the temper out of it. Then, forge the end down a little thinner, round it roughly and punch a hole through it while it is hot.



When splicing, use a folding arm from an old buggy top to hold the two wires together and clamp tight by means of a loose sliding ring. This leaves both hands free. Run one of the wires through the hole in the ready-made file and it is easy to make as close a wrap as you desire, after which you do the same with the other wire. When both are done loosen the ring, the buggy top brace comes off and the job is complete.

GLASS IN SACKING SPOUT.

In a sacking spout where the stream is small and the sack may take quite a while to fill it is quite a convenience to have a piece of glass in the front of the spout about the height of the eves through which you can look at any time and tell if the sack has filled and the stream is backing up in the spout. It saves the time and trouble of going to the sack and examining it each time as a glance as you pass is all that is necessary. That is just one of those little things which will save the miller time and trouble.

THE PRACTICAL MILLER

CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

FOR SALE—50-barrel Midget Marvel Mill with elevators, beltings, etc., and complete installation for flour mill plant. Also grain grinder, ton per hour capacity. Good reasons given for wanting to dispose. Will sell cheap. Terms given for satisfactory paper. Reply Box 145, Carleton Place, Ont.

WANTED—Single or double Naylor Bleacher which was manufactured at Essex, Ont. State full particulars, conditions, and best cash price in first letter. Reply Box 109, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED — By Head Miller, with 20 years practical experience in modern Canadian mills up to 4,000 barrels capacity. Can guarantee best results as to quality and yield on both hard and soft wheat, and maintain mill at highest point of efficiency. At present in charge of a 1,000 barrel plant. Reply Box 85, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

PRACTICAL MILLER with 23 years experience seeks position with plant having daily capacity of 250 barrels or upwards. Can furnish excellent references. Reply Box 82, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—A 50-barrel Midget Marvel Mill, also complete installation of a flour milling plant. In use about three months. Machinery must be moved from actual premises. Good price for cash. Reply Box 103, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Head miller, with twenty years experience in 150 and 275 barrel mills, and still employed, is desirous of making a change. Applicant is 36 years of age, married, and can furnish excellent references. Reply Box 84, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

SALESMAN WANTED for the Province of Quebec. State requirements, experience and salary wanted. Reply Box 102, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

CYLINDER COCKLE MACHINE wanted. Must be in good condition and reasonable. Reply Mr. Charles Wyild, Ripley, Ont.

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WATER POWER FOR SALE.—One thousand horsepower on three leading Canadian railways and Great Lakes waterway. Less than 5 per h.p. per year. Elevator close. Town of five thousand population. Situated in Old Ontario. Reply Box 111, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

POSITION WANTED as head miller in a small or medium sized mill. Applicant has had twenty years' experience. Thirty-seven years of age. Reply Box 110, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FLOUR SALESMAN, speaking English, French and Spanish, seeks connection with milling concern. Reply Box 106, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—Sixty Barrel Stratford flour mill, Allis Rolls, Whitlaw Flour Sifter, Packer, Cockle Machine, etc., all in good running order. Full particulars and price on application to The Pearce Co'y, Ltd., Marmora, Ont.

WANTED TO EXCHANGE—A 20-inch McLachlan Chopper for a 15-inch Moore or Vessot, after April, or will buy. Reply F. H. Robinson, merchant miller, Cookstown, Ont.

MANAGER AVAILABLE—Has had ten years experience, five years of joint management in a 100-barrel mill. Applicant is 28 years of age and unmarried. Temperate and a good worker. Salary required depends on capacity of mill and size of town in which located. Reply Box 108, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

FLOUR SALESMAN open for immediate engagement in the Maritime Provinces. Experienced. Reply Box 104, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—Flour mill properties, some operated by water power, others by gas engine and electric power. Write me before buying. Prices, $3,200 to $15,000. List your mills with me for sale. No listing charges and quick results if propositions will bear inspection. Apply E. Armbrust, Niagara Falls, South, Ont.

POSITION WANTED—Miller, thirty-seven years of age, is open to take charge of small or medium-sized mill, or to take position as second miller in large plant. Has had twenty years experience. Thoroughly familiar with all branches of milling. Can furnish excellent references. Reply Box 107, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

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THE PRACTICAL MILLER

The Question Box

With a view to making this department one of real service, "Canadian Milling & Grain Journal" cordially invites its readers to send in their problems to The Question Box. There are but very few millers or elevator operators who do not have worries in the proper conduct of their plants. It may be due to lack of experience or inability to trace cause and effect. The logical and sensible thing to do is to ask someone who may possibly know. Often he is not at hand, and still oftener the perplexed miller or elevator operator does not want to show his lack of knowledge. Under these circumstances he can address his inquiry to the craft through this journal. His name will not be divulged if he wishes to remain incognito. Someone is sure to reply who has had similar problems to meet or similar questions to ask. We guarantee to devote all the space necessary to the asking and answering of questions, so do not be backward in sending them in.

THE EDITOR.

QUESTION.—Can odor in flour be detected in the dry or in the wet without baking? Suppose the flour is tainted while milling or after milled, or in other words while in the process of manufacture. (The wheat is easily detected while grinding.)—C. R.

ANSWER.—Abnormal odors, regardless of their cause, can usually be detected on the flour without baking. When the flour is warm the odor can be detected much easier. "Doughing up" the flour with hot water is helpful in some cases. A good method of examining a flour for odor is as follows: Thoroughly cleanse a glass capped fruit jar and fill it half full with flour and shake thoroughly. Remove the cap after a few minutes and note the odor. If the flour is normal in odor it is almost certain that the bread will be normal unless it be contaminated with something other than the flour.—EASTERN MILLER.

FLOUR MILLS IN AUSTRALIA.

The Commonwealth Year Book gives some figures for the milling industry of Australia. The figures for the different states are not all of the same year, however. Some are for the statistical year 1919-20 and others for the calendar year 1919. The states rank as follows in the number of mills:

	No.	Hands
New South Wales	58	1,129
Victoria	51	1,064
South Australia	45	705
Western Australia	17	407
Queensland	22	330
Tasmania	8	98
Total	201	3,733

The total production of flour for the year was given at 1,050,000 tons (or about 10,000,000 barrels) valued at about $70,000,000. The bran and mill feed amounted to 449,000 tons valued at over $15,000,000. The flour production was about twice what it was in 1915. The value of the milling plants including land and buildings was about $11,500,000. New South Wales showed about two-fifths of the total value. The wages paid amounted to $3,300,000.

The Duster

Little Timothy, who has been studying history, but a short time, thought he would give his grandfather a tryout on the subject, so he asked: "Say, grandfather, what great war broke out in 1854?" The old gentleman laid down his paper, and looked thoughtfully at the boy for a moment, and then a sudden light dawned upon him. "Why," he said, "that was the year I married your grandmother."

TO-DAY'S BEST STORY.

Young mother (exhibiting her twins to friend who was married on the same day):
"I had a presentiment I would have twin girls, because the day we were married the band kept playing "Two Little Girls in Blue."
Friend (with look of horror): "Heavens! Our band played "Ten Little Nigger Boys."

"Who's the stranger, mother dear?
Look! He knows us! Ain't he queer?
"Hush, my own! Don't talk so wild,
"That's your father, dearest child!"
"He's my father? What a joke!
Did not pa last winter croak?
Father didn't die, you dub!
Father joined a curling club,
But they closed the club, so he
Had no place to go, you see!
No place left for him to roam,
That's why he's coming home.
Kiss him—he won't bite you, child,
All these curling guys look wild!"

Rufus Redd Dogg

"I ain't aimin' t' be raygarded as a pessimist," exclaimed Rufus Redd Dogg somewhat apologetically as he leaned back in his chair in the corner grocery after having beaten Old Joe Hobbs for about the 'umteenth time at checkers, "but et seems t' me thet civili-zation is slippin' back."

Pausing until this weighty declaration had been digested by all and sundry, Rufus continued.—"I wuz readin' in a book t'other day thet 'n ancient Greece anny man cud interduce a bill 'n th' Parliament ev'n though he wuz never elected a member. But in presentin' his bill he had t' stand with a rope around his neck. Ef th' bill wuz approved as wan thet 'ud prove benneficial t' th' public or th' nation at large, th' rope wuz removed, but ef th' bill wuz disapproved th' rope wuz not removed—until afterwards."

"I opines ther wuz not manny demmygogues in them happy days, an' I'm thinkin' thet et may yet be necessary t' revive th' practice, 'specially when ther's so much talk about resserectin' th' old Wheat Board, not t' mention other obnoxious leggis-lation...yes ...sirree."

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Grain Elevator Machinery

requires years of experience. We have made the equipment for over 3000 Elevators, which are scattered all over the three Western Provinces.

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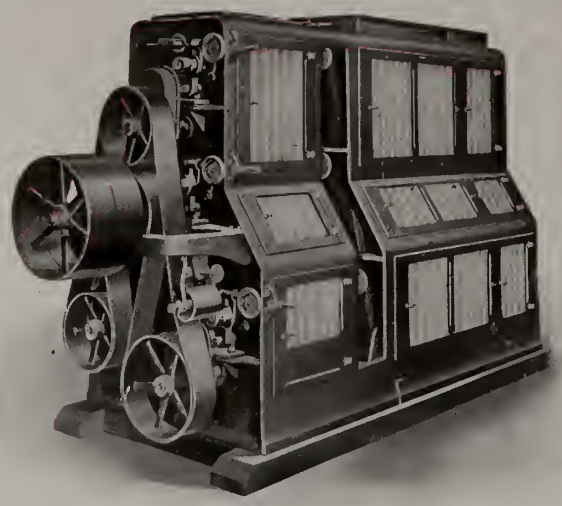

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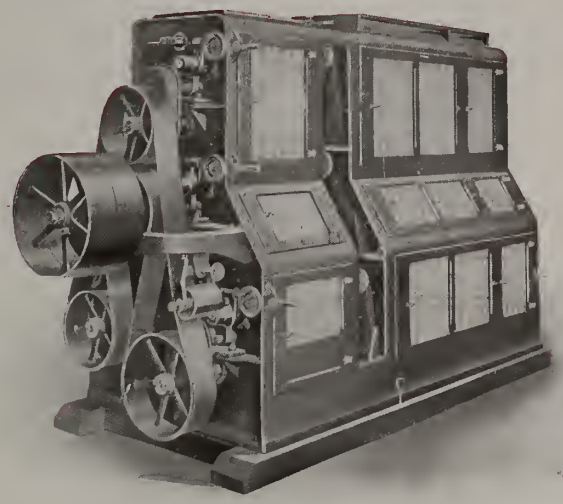
CANADIAN
Milling & Grain
JOURNAL

VOL. III MONTREAL, MAY 1st, 1922 No. 7

THE YELLOW BOOK

MIDGET MARVEL MILL



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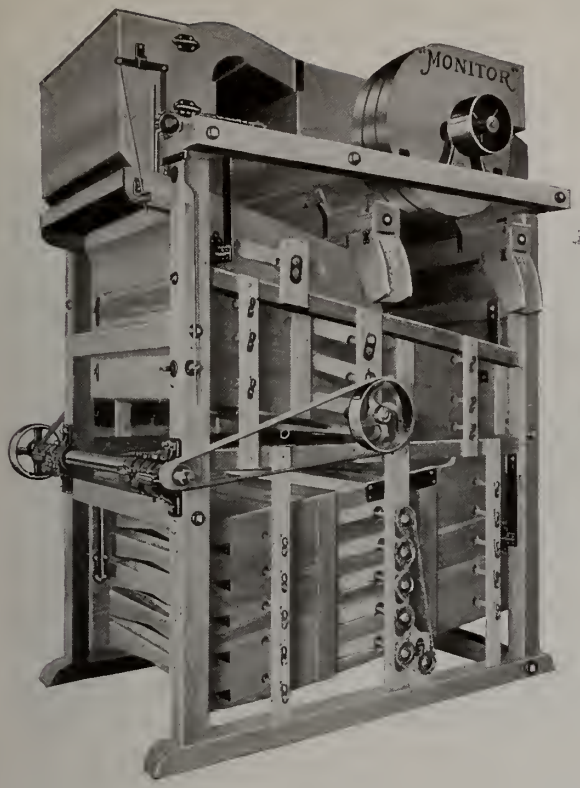

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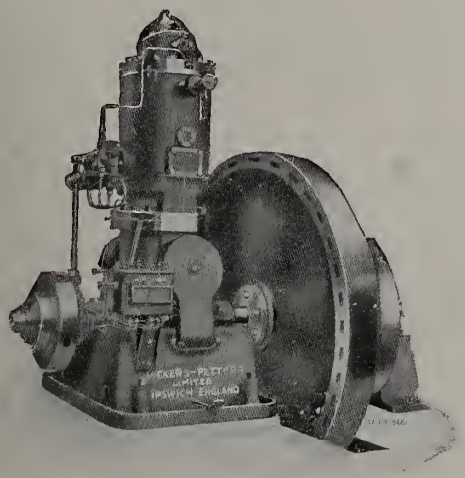

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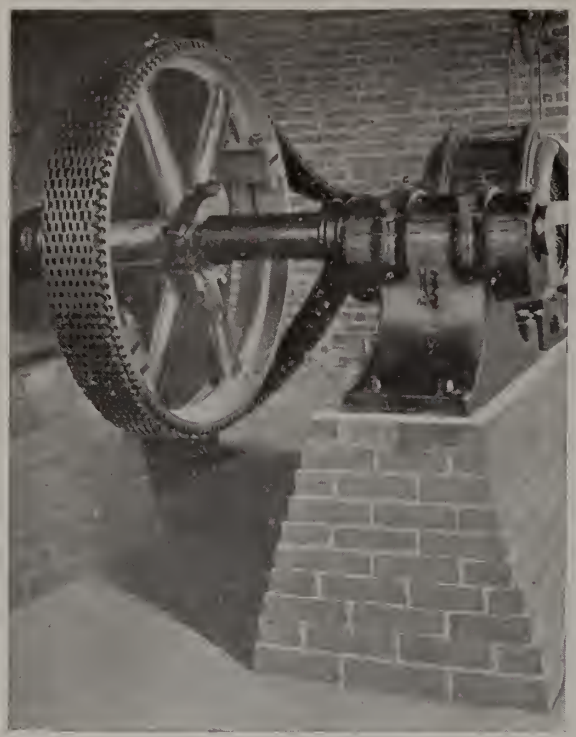

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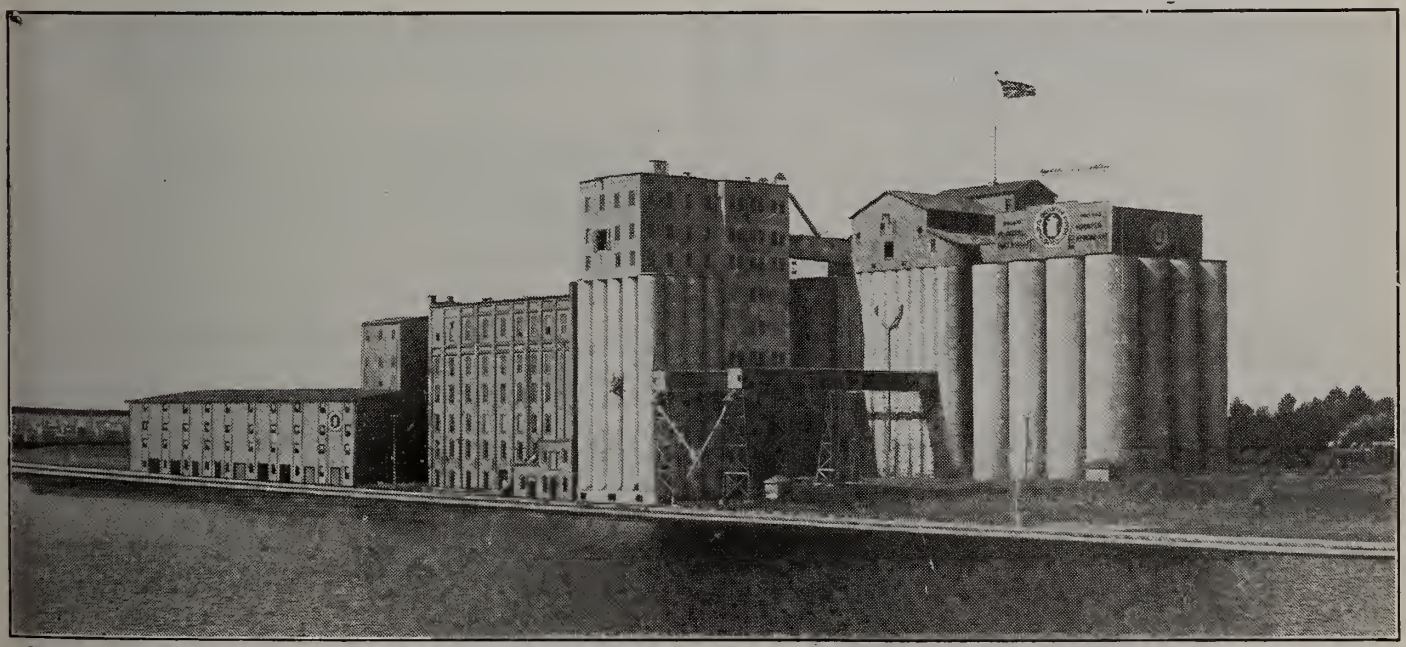

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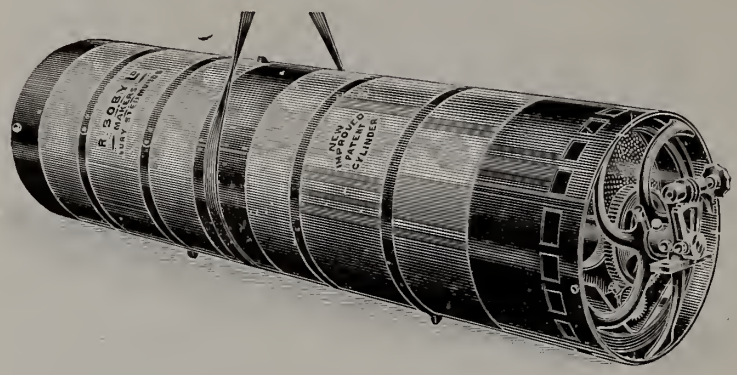

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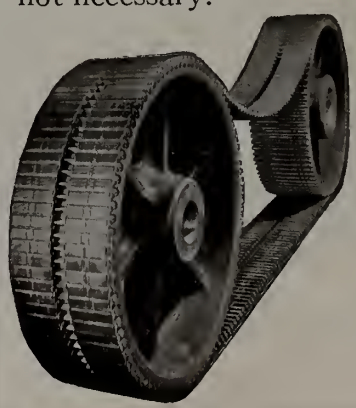

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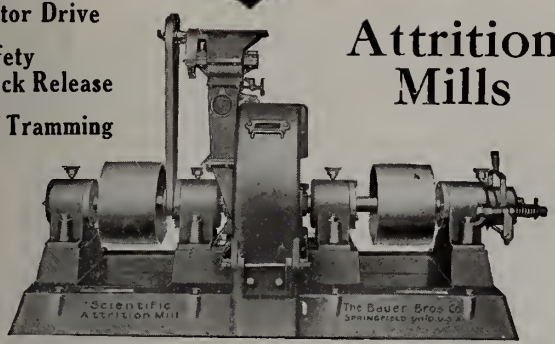

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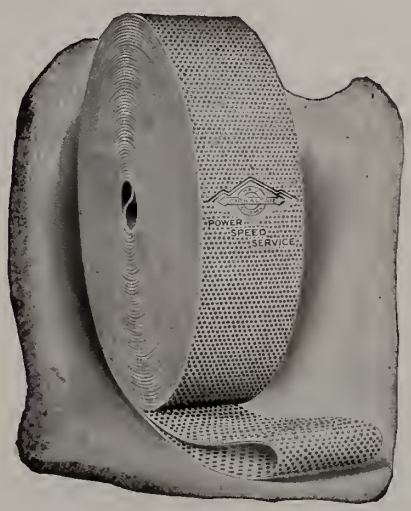

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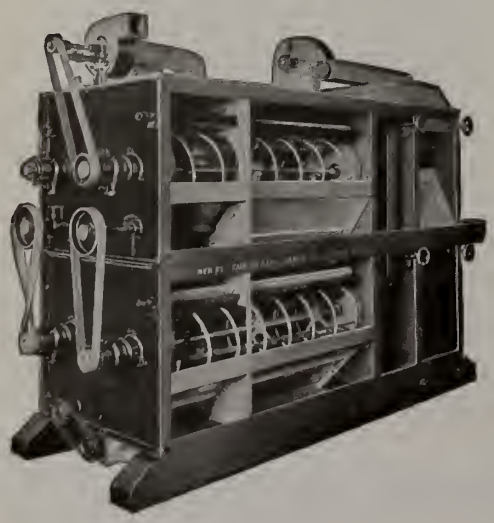

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VOL. III MONTREAL, MAY 1ST, 1922. No. 7

CANADA'S ONLY MILLING AND GRAIN PAPER

Public Bodies Oppose Control.

WHEN such important public bodies as the Canadian National Millers' Association, the Montreal Board of Trade, the Corn Exchange Association and the Chambre de Commerce unhesitatingly condemn the move it may be taken for granted that reasoned public opinion throughout the country is utterly opposed to the re-establishment of anything savoring of Government control of the wheat crop. Not only has the Canadian National Millers' Association made public its reasons for its attitude, a comprehensive summary of the arguments of that organization appearing elsewhere in this issue of "Canadian Milling & Grain Journal," but President A. E. Labelle declares that the imposition of control will mean the ruination of the Canadian milling industry.

Unrelaxing Watchfulness Necessary.

THE opinion of the law officers of the Crown recently submitted to Parliament and which was to the effect that the re-establishment of a compulsory wheat board by the Federal authorities would be ultra vires will not be the last heard of the matter by any means.

The protagonists of compulsory control will not cease their agitation for what amounts to nationalization of the milling and grain industries because of a single defeat. Their leaders are pledged to stop at nothing to secure the object desired and consequently the watchfulness of those who realize what a national catastrophe the putting into effect of any measure of compulsory control would mean, must not be relaxed until the Supreme Court to which the question was to have been originally submitted, or eventually the Privy Council at London has finally disposed of the matter.

With a view to getting round the provincial autonomy aspect of the case which was the rock upon which the Dominion's legal status was built, the Premiers of Manitoba, Saskatchewan and Alberta have already been approached to give their consent to the re-establishment of compulsory control. Furthermore, they are reported to be in favor of the move. There is also talk of seeking an amendment to the British North America Act to enable control to be put into effect but this is merely what it undoubtedly is—mere talk.

Under whatever guise it is attempted compulsory control must be fought to the last ditch and there given its coup de grâce.

Private Rights Must be Respected.

WITHOUT taking into consideration whatever the resolution of representative public organizations opposing the projected restoration of Wheat Control, the unyielding attitude of the Winnipeg Grain Exchange, the largest cash grain market in the world against surrendering either its machinery or the rights of its members to a control board may probably prove the rock upon which the control proposals will eventually be wrecked.

World conditions are totally different to-day from what prevailed in 1916 when food production among the allied nations was relegated to second place in the superhuman strength of the effort to put every able-bodied man into the field against the Germanic colossus then at the height of its war fury.

Then it was that the value of Canada's wonderful wheat stocks became apparent. The allied agents within a few months had created a corner in wheat, such, perhaps, as was never before known. In May of 1916 wheat was quoted round $1.28 the bushel. Within a year it was selling round $3.65 per bushel.

Banks, elevator companies and commission houses, as well as every other interest connected with the exchange, were in the position of going home in a barrel every night. One hundred million dollars or more was in jeopardy. It was the basis of a financial calamity of unknown magnitude that was only averted when the consent of the British Government was obtained to the liquidation of the corner on a cash price basis, and $2.45 per bushel was set as the price of No. 1 Northern and grades not entitled to delivery on contract were declared acceptable.

Then followed the wheat board and with it came a grain marketing system designed to appreciate the fact that a war was in progress and designed to give every assistance to the Government in its task.

The situation, however, is different to-day. The Winnipeg grain exchange is not battling within itself and it has taken the perfectly proper and justifiable stand that the machinery which generations of individuals have built up shall not be confiscated to the benefit of a section of the agrarian population ad lib. by the present or by any other government.

Justice, Not Paternalism.

FREIGHT rate discrimination and the continued lack of modern flour handling equipment at seaboard are not only militating against the normal development of the Canadian flour export trade, but threatens the Canadian milling industry with the

possible loss through the competition of foreign countries of much of the export business that it already has.

The loss of export flour trade means increased domestic competition for a survival of the fittest and a big milling capacity is doomed to go out of existence with a certainty that no platitudes can prevent.

There is no theorizing in this. The result is certain.

In making adjustments the principle of equalizing rates must be maintained without loop-holes or equivocation.

When the damage has been done, and the victims gain an ear for their cause, it will be too late to act.

Canadian millers are not looking for paternalism. Far from it. They are, however, looking for equity and justice, which they have a right to demand not only as citizens but because of the importance of their industry with regard to the future prosperity of the country.

The Production and Consumption of Wealth.

THE production of wealth must always exceed the amount of wealth consumed. If, in the production of 100 units of wealth, more than 100 units of wealth are consumed, the position immediately becomes serious. Current is being taken out of the accumulator faster than it is being recharged. The wealth of a country or community is not built up on the principle of the widow's cruse. Neither can wealth be produced by Act of Parliament, Federal or Provincial, or by a municipal by-law.

The amount of wealth we consume to satisfy our needs depends on our standard of living. The more luxuries we enjoy over and above our normal requirements, the higher will be what we call the standard of living. The natural trend, and the conscious aim, of western civilization, is to improve the conditions under which its members live. Better food, superior clothes, more comfortable houses, and more entertainment. Municipally, better collective services as trams, water supply, sanitation, lighting, etc. Nationally—postal services, armies, air services, railways, judiciary, etc.

All these services, while not strictly speaking luxuries, mean that the members of the community enjoying them must produce the wealth to maintain them. The inhabitants of Canada must be greater wealth producers, per head of population, than, say, the inhabitants of the backward Balkan States, where the standard of living is lower than our own. The inhabitants of Canada must produce more wealth per head of population than the inhabitants of any other country in the world.

Changed Business Conditions.

FOR the next ten or twenty years it would seem as though we shall be working in a different kind of economic world. Conditions have been altered and the rules of business will change in many ways, and he who senses this most thoroughly will be the most successful.

Through the twenty years just passed we have, so to speak, been trading in a rising market. We have grown accustomed to it. We have shaped our methods and our policies to conform to it. It has inclined our very manner of thinking, because these continuing conditions have become the fundamentals of the business world. But now the war and its aftermath have confused it all and turned things generally topsy-turvy.

So the wise economists have delved back into the records of former times to ascertain what we may expect. And they tell us that for twenty years or more we shall be doing business on a falling market. When one stops to think of it, this is a matter of tremendous import. For it means that we must all change our ways of doing business and cease following the guidance of the very rules that we have all learned to trust.

Most of the knowledge which men use in their affairs comes out of the experience of their own times. They learn by what they do, and what they see, and what they hear. This plus the judgment left recorded by previous generations forms our practical work-day education. We know what we have learned. And now, behold, what we have learned does not come anywhere near what we must know.

Something Worth While.

ONE of Canada's most pressing needs at the present time is the legislating into effect of a comprehensive and ambitious program for the development of her foreign trade. With the industries of a greater part of the world in a state of disorganization; with practically every one of the sixty-odd vessels of the Canadian Government Merchant Marine seeking sufficient cargoes in foreign ports to pay their coal bills, with thousands upon thousands of workers in the country waiting for industrial activity to be substantially encouraged so that factories and workshops may open up to capacity and provide work for them, the present time could not be more opportune for such an undertaking.

Of all the great producing countries, Canada, considering its resources and its possibilities has possibly done less than any other to go after foreign trade seriously. True, we have a corps of trade commissioners in different parts of the globe accomplishing excellent work but their strength and the volume of their efforts when contrasted with what is being done, say, by the United States, England, Japan or even Germany is but small indeed.

Looking facts square in the face, Canada in the past has been content to allow her export trade to be handled and controlled by other countries, with the natural indeed, the inevitable result that Canada has always taken second place to the interests of those countries through which it is controlled.

Both the national railways and the national marine are losing money. Increased trade can do much towards accomplishing their salvation and it is distinctly up to the Government at Ottawa to get busy and by placing a trade commissioner at every strategic point in the commercial world ensure advantage being taken of existing opportunities which will not be so numerous or so susceptible to exploitation later on when the world has settled down to work in earnest.

EASTERN PROVINCES

MONTREAL

Dubrule Building
Phillips Square

Tel. Plateau 1983

MONTREAL MAY 1ST, 1922

THE MONTREAL MARKETS.

Flour.—A steady business continues to be done in spring wheat flour for export account, there being a fair demand for small lots at firm prices for May shipment; but apart from this the market is quiet, there being no improvement in the movement for local or country account, and prices are unchanged with car lots of first patents quoted at $8.50; second patents at $8, and strong bakers at $7.80 per barrel in jute bags, ex-track, less 10c per barrel for spot cash.

There has been no change in prices for winter wheat flour, but the undertone to the market is firm on account of the increasing scarcity of supplies for which there continues to be a steady demand, and sales of car lots of choice grades are being made at $6.75 per barrel in second-hand jute bags, ex-track, and smaller quantities at $7 per barrel, ex-store with winter wheat patents at $7.50 to $7.75 per barrel ex-store in new cotton bags. The demand for white corn flour shows but little improvement, and prices are unchanged at $5 to $5.10 per barrel in jute bags, delivered.

Millfeed.—The trade in millfeed continues fairly good and the tone of the market is firm with sales of car lots of Manitoba bran at $32.50, and shorts at $33 per ton, including bags, ex-track, and smaller quantities in mixed car orders selling at $28.25, shorts at $30.25, and middlings at $32.25 per ton, including bags, less 25c per ton for spot cash, while pure barley meal is changing hands at $38 to $40, pure grain moullie at $38, and feed cornmeal at $35 per ton, including bags, delivered. The market for rolled oats is quiet at $3 per bag of 90 lbs., for standard grades.

Baled Hay.—The trade in baled hay is fair, and the tone of the market is steady with sales of car lots of good No. 2 timothy being made at $29 to $30, No. 3 timothy at $27 to $28, and clover and clover mixed hay at $24 to $26 per ton, ex-track.

Grain.—The export trade in grain here has on the whole been quiet, and the market has been without any special feature to note. There was some demand from foreign buyers for wheat and oats and sales of a few odd loads have been made for May shipment. A recent inquiry from New York exporters through Montreal brokers for American rye has been good for last half August shipment from this port, but as Chicago houses had none to offer except for first-half or second-half September shipment, and there was also some demand from the source for American 36-lb. clipped oats, no business resulted. New York wired recently that there was a good demand from foreign buyers in that market for wheat and that sales of 1,000,000 bushels were made in all positions.

The Port of Montreal Which Has Just Commenced What is Expected to be a Record-Breaking Year.

THE DUTCH FLOUR TRADE.

There has been a greatly increased export trade in flour of all kinds from the Netherlands to various nearby countries, especially Germany, Czechoslovakia, and Austria. This trade, which has included not only flour from Dutch mills but also a considerable portion of the imports from Canada and the United States, should not be confused with the transit trade, as it represents a general movement that has been greatly furthered by the facility with which sales of flour from stocks in the Netherlands to those countries with debased currencies can be financed. The trade during the year was also marked by a tendency to use imported Canadian and American flour and ship the output of the Dutch mills.

There was a distinct improvement in the quality of the bread used in the Netherlands in 1921, due not only to the elimination of potato flour in the cheaper grades but also to the increased use of the better grades of wheat flour.

HEAD OF MILLERS' ASSOCIATION AND MONTREAL CHAMBRE DE COMMERCE OPPOSE RESTORATION OF CONTROL.

"The establishment of a government wheat board will kill the flour milling industry in Canada," declared Brig.-Gen. A. E. Labelle, president of the Canadian National Millers' Association, addressing the members of the Chambre de Commerce at their regular meeting recently. General Labelle asked the Chambre to pass a resolution protesting against the Government meddling with wheat prices, declaring that one of Canada's greatest industries would be doomed if this were allowed to happen.

The Chambre approved of the resolution in principle, and the secretary was directed to frame the official resolution, which will be forwarded to the Government.

The speaker believed in helping the farmers of the West in every way possible, but not at the expense and ruination of the people of the East. $80,000,000 was invested in flour milling concerns in Canada, and one of the most important export revenues would be lost to the country, he contended, if the government wheat board came into being.

Board of Trade Also Condemns.

The proposed revival of the Canada Wheat Board was the subject of lengthy consideration at a recent meeting of the council of the Board of Trade, over which Mr. Wm. M. Birks presided. The result of the discussion was a unanimous expression of opinion to the effect that the Government should not re-impose on the trade of the country any such restrictions as are involved in the proposed revival of the Wheat Board, as, however justifiable and necessary such restrictions may have been under stress of the abnormal conditions incident to the war, such interference in the ordinary course of business is now unwarranted, and would prove generally inimicable to the interests of this country.

Imports of flour to Palestine in the seven months ended October last amounted to 5,615 tons, representing an increase of 921 tons compared with the imports in the corresponding period of 1920. Australia is participating in this trade.

Canadian flour exporters desiring representation in Palestine should address their enquiries for agents to the Director, Department of Commerce and Industry, Lazarist Hospice, Jerusalem.

LAKE OF THE WOODS MILLING CO., LTD., MAKES NEW STAFF APPOINTMENTS.

Recent staff changes in the Lake of the Woods Milling Co., Ltd., include the appointment of Mr. H. Hutchison as assistant secretary, which position was held by Mr. Robert Neilson, who retired from the company some months ago: the appointment of Mr. W. L. MacGregor as sales manager for the Province of Ontario and the Maritime Provinces; the appointment of Mr. D. L. MacDougall as assistant local manager for the Province of Quebec, and the appointment of Mr. H. C. Moore as manager of the export department.

QUOTATIONS ON BRAN AND SHORTS.

The following nominal quotations on bran and shorts have been reported by the Canadian National Millers' Association, Coristine Building, Montreal, to the United States Customs Authorities as the prices of these commodities now in effect. These prices are the net cash prices in bulk, f.o.b., the mill:

	Bran.	Shorts.
Montreal	$25.50	$27.50
Toronto	25.50	27.50
Port Colborne	21.00	23.00
Fort William	19.00	21.00
Keewatin	18.50	20.50
Winnipeg	18.00	20.00
Moose Jaw	14.00	16.00
Calgary	9.50	10.50

MONTREAL THE PREMIER GRAIN PORT.

Exports of domestic and bonded grain from the undermentioned Atlantic and Gulf ports for the year 1921, as per returns of the Department of Commerce, Washington, D.C., with the exception of those for Montreal, were:

	Bushels
Montreal	138,453,980
Galveston	94,173,049
New York	84,698,581
New Orleans	73,689,399
Baltimore	55,314,808
Philadelphia	46,769,286
Portland, Me.	13,859,040
Boston	5,078,617
Newport News	485,118

THE CHICAGO MARKETS

The following table compiled from figures furnished by Messrs. Bryant Isard & Co., members of the Toronto Stock Exchange and the Chicago Board of Trade, 84-90 St. Francois Xavier Street, Montreal, show highest price levels recorded on Chicago Board of Trade, from April 13, 1922, to April 27, 1922, inclusive.

	April 13	April 14	April 15	April 17	April 18	April 19	April 20	April 21	April 22	April 24	April 25	April 26	April 27
May Wheat	1.34¼	Good Friday, Exchange Closed	1.43	1.45	1.44	1.43½	1.43¼	1.47¾	1.49⅛	1.49	1.47¼	1.42¼	1.42⅛
July Wheat	1.23⅜		1.26	1.27¼	1.26⅜	1.25⅞	1.25⅜	1.28	1.30¼	1.29⅜	1.29⅝	1.28¾	1.28½
September Wheat	1.18¼		1.20	1.20¾	1.19¾	1.20	1.18⅞	1.20	1.20½	1.20⅛	1.20⅛	1.20¼	1.20¼
May Corn	0.60⅛		0.61½	0.61⅞	0.61⅜	0.61¼	0.61¼	0.62	0.61⅞	0.62	0.61⅝	0.61	0.61⅛
July Corn	0.63¾		0.65	0.65½	0.65½	0.65⅛	0.65	0.65	0.65¾	0.65⅝	0.66	0.64¾	0.64⅞
May Oats	0.37⅝		0.38⅜	0.39	0.38¼	0.37¾	0.37⅞	0.33⅜	0.38½	0.38⅝	0.37⅞	0.37⅝	0.37¾
July Oats	0.40⅜		0.41⅛	0.41⅞	0.41⅛	0.40½	0.40¾	0.41¼	0.41⅛	0.41⅜	0.40¾	0.40¾	0.40⅞
May Rye	1.04¾		1.05	1.08¼	1.07¼	1.07¾	1.07¼	1.08¼	1.10½	1.10⅜	1.12½	1.11¼	1.09
July Rye	0.97		0.97⅛	1.00¾	0.99¾	1.01¼	1.03½	1.03¼	1.05½	1.05¾	1.05¾	1.05	1.04⅞
May Barley	0.65		0.64¾	0.66	0.66	0.66	0.67	0.66	0.66⅛	0.66	0.66½	0.66¼	0.66¼

ONTARIO

TORONTO

TORONTO MAY 1ST, 1922

THE TORONTO MARKETS.

Flour.—There is still a very slow local demand for flour for export and very little business is passing, United Kingdom buyers declining to follow the advance in the prices of wheat. Manitoba flour is quoted for export from 45 to 46 shillings and sales have been made at the former price, although the latter price should prevail if there is to be any profit in the business. However, English buyers decline to pay the price. Ontario winter wheat flour is still beyond an export basis and there is very little doing in that line. The domestic market is equally dull, the quotations ranging from $6.25 to $6.40, Toronto and Montreal freights.

Millfeeds.—Bran is very scarce and continues to command a premium in straight cars. The scarcity is probably due to many of the mills running light and to the close approach of the grass season. During the next month it is predicted that the demand for bran will suffer a falling off and that grass as a feed will take its place. The prevailing quotation for assorted cars is $28.00. There is also a scarcity of white middlings which are quoted at $36.00. Feed flour is fairly plentiful and there is comparatively little enquiry for it. Shorts are quoted at $30.00 and feed flour at $38.00. It is stated that some of the mills are getting as high as $32.00 for bran on special deals, although $28.00 is about the standard price.

Oil meal.—The offerings of oil meal are liberal, but the demand is very dull. The prevailing quotation is $54.00, Toronto freight. It is not anticipated that there will be any further demand for oil meal until after the grass season is over.

Oatmeal and rolled oats.—There has been no enquiry recently for oatmeal or rolled oats for export, and the local market is still out of line with the United Kingdom ideas of value. Rolled oats are quoted at from $3.00 to $3.10 per 90-lb. sack for the domestic market.

Grain.—The wheat market, although somewhat irregular, has been strong on the whole, and prices show advances of around eight cents per bushel during the period. Export demand has been on a slightly better scale, while there is a feeling that the United States has over-exported, and that she will have to import from Canada on a large scale before the new crop comes in. In this connection it is stated that considerable Manitoba wheat was shipped to Duluth on the opening of navigation for grinding in United States mills. Local milling demand has been light owing to the slow flour markets. Western oats show a material change in the grains to arrive. No. 2 is quoted around 58 cents; extra feed at 55¼c and No. 1 feed at 55¼c. Eastern demand for wheat has been somewhat slow but a fair demand has been coming for western oats and a little enquiry for corn.

PROMINENT FORT WILLIAM GRAIN MERCHANT'S VIEWS ON IMMIGRATION.

"The question of immigration into the Dominion of Canada is a very live one at present and has been engaging the attention of some of the best and most experienced men in Canada in this line," according to Mr. N. M. Paterson, Pres. of Messrs. N. M. Paterson & Co., Ltd., grain merchants and elevator owners, Fort William, Ont., who has been making some investigations of his own into the matter. "Many different opinions have been expressed by those who look upon the question from different angles, and who have given public expression of these opinions.

NORMAN McL. PATERSON.

"In reading over the controversy regarding immigration between Col. J. S. Dennis, Chief Commissioner of the Department of Colonization and Development, of the Canadian Pacific Railway, and Sir Clifford Sifton, it might be of interest to go into some of the figures which give the average layman a little larger view of the situation, and after doing so, one cannot come to any other conclusion but that Col. Dennis is very close to being correct.

"West of the Great Lakes the government statistics show 217,000 farmers. Allowing five to the farm, it leaves an agricultural population of 1,075,000. Figures given for the whole of Canada show 350,000 farmers roughly, or a total agricultural population of 1,750,000. Allowing that the population of Canada is roughly 9,000,000, it shows that for every individual, man, woman and child on the farm, there are five individuals engaged in forest, mine and cities, or, in other words, it takes five

individuals engaged off the farm to keep one individual on the farm, and this is apparently necessary in order to keep an equitable balance, as things exist at present, in the Dominion of Canada. Therefore, if we bring 200,000 immigrants in any one year, it is necessary to bring in five times this number of immigrants for forest, mine and city, or, in other words, out of 1,000,000 immigrants per year, we would be fortunate if we got 200,000 bona fide farmers. I am trying to show that we need others besides agriculturists as immigrants.

Endorses Col. Dennis.

"Again, it has been said that the unemployment is so severe that it is unnecessary and unwise to bring in further laborers. Prominent contractors are already hesitant about taking any large work, figuring on the present labor supply, as the actual facts are common labor is recruited mostly from the fresh immigrant.

"There has been no immigration to speak of for seven years, consequently the supply of common labor will be very scarce indeed with a renewal of construction activity. The best labor has been absorbed in various ways, through activity in the forest, mine and farm, and the unemployed at the present time are not those whose services it is found most profitable to use in construction endeavor as laborers. So that for any further advance that this country hopes to make, it is positively necessary to open the doors and bring in those who will build the country up in its different departments.

"I think this country should strongly endorse Col. Dennis and any other organization or endeavor that will make an effort to bring in those who are anxious to work for a living."

MIDGET MILL OWNERS ORGANIZE.

Toronto. — Following preliminary steps which were taken during the latter part of last year a number of Ontario owners and operators of Midget Marvel Mills have organized themselves as "The Ontario Marvel Millers, Ltd." They have secured a charter and have opened an office and warehouse at 108 Don Esplanade from which will be handled the flour, feed and grain shipped in by members. The provisional directors of the new concern, which like "Canadian Milling & Grain Journal" is the only one of its kind in Canada, include Messrs. James L. Naylor, Essex; Edward Pitts, Paris; John C. Paxton, Uxbridge; R. J. Reesor, Markham, and Charles Wilson, Brooklin.

Mr. Geo. S. Robson has been engaged as manager.

The Modern Sophocles

What can the universe hold to hurt or harm the soul which is undismayed? If sorrow come, let it not find us shivering and afraid, but steady-eyed, with hearts unquailing and standing on our feet. "They that be with us are more than they that be against us." Man's soul is great enough to meet the greatest demands which fate can make. Not our part, howbeit, is it to look out for difficulty and trouble, to go out half-way to meet it, to live on the alert. If it is to come, it will come bringing with it blessings manifold, but the trouble which we make for ourselves by our fears is barren ever and fruitless. Worries and cares for the most part are born of nervous apprehension solely. To such meaningless and self-inflicted torture man should scorn to submit.

EXPECTS CONTROL FOR THIS YEAR'S CROP!

Ottawa.—Mr. H. W. Wood, president of the Canadian Council of Agriculture, who gave evidence recently before the agricultural committee and is remaining to watch the course of events, has issued the following statement in connection with Parliament's debate on the Wheat Board:

"The reference back to agricultural committee of its proposal to submit the constitutional aspects of the proposed legislation to re-instate the Canadian Wheat Board to the Supreme Court has given the board a chance of life which otherwise would have been denied it. Acceptance of the committee's resolution would have meant a complication of legal technicalities with the merits of the case stated before the committee and no board could have been constituted in time for this year's crop. The question is now open to be decided by the agricultural committee without the reference to the Supreme Court holding it in abeyance.

Subsequent to the receipt of the above despatch from Ottawa, the Agricultural Committee submitted its query regarding the constitutionality of compulsory wheat control to the law officers of the Crown instead of to the Supreme Court as originally planned. The opinion of the Department of Justice which was recently made public declared the proposed re-establishment of compulsory control to be ultra vires of the Dominion Parliament. Even in the remote likelihood of the decision being appealed and control being sustained by a higher judicial body there is not the slightest chance of its being made effective this year.

SEND US **YOUR** NAME

To be listed in the Free Milling Directory of Canadian Flour Mills, managers, superintendents, head and second millers, and engineers.

IF YOU WANT TO BE INCLUDED

We must have your name and other particulars on accompanying form. Kindly fill in and return promptly.

Superintendent .....

Head Miller .....

Second Miller .....

Name of Firm .....

Address .....

Daily Capacity .....

Power Used .....

WESTERN PROVINCES

WINNIPEG

WINNIPEG MAY 1ST 1922

THE WINNIPEG MARKETS.

Flour.—The millers of Western Canada report that the flour trade at present is experiencing an abnormally quiet time. Buying for the domestic trade is again on a hand-to-mouth basis, with little apparent change in prospect, while the export trade is practically at a standstill. Some mills have closed down entirely while others are only working daytime hours. It is reported that there are numerous enquiries for flour from overseas buyers, but prices on this side are so much higher than all bids received that no business has resulted or is possible until buyers and sellers get closer together on prices.

There was no change in flour prices during April, but the price of wheat is getting near the level when an adjustment of flour prices will have to be made. With the price of cash wheat at Fort William around $1.47, as it was April 19, there has been an advance of about 10c since there has been any advancement in flour prices. Present prices are: First patent spring wheat flour $8 bbl., seconds $7.40, first clears $6.80, jute, mixed cars, 30-day terms, delivered at any point between Fort William and the western boundary of Manitoba. In 98-lb. cotton bags, prices are 20c over the jute basis. Saskatchewan points take 10c under these prices, and from eastern Alberta to the Pacific Coast values rise progressively to $8.30 for top patents at Vancouver and like points.

Millfeed.—The demand for millfeed is not quite so large as at the beginning of April. The domestic trade continues fair due to the lateness of spring and warmer weather, but sales are practically confined to this trade, and very little is being shipped to Eastern Canada or the Pacific coast. Millers report they are able to easily take care of all requirements. Prices remain firm, present quotations being: Bran $22.00 per ton and shorts $24.00, in bags, delivered, Winnipeg territory.

Oatmeal.—The demand for rolled oats and oatmeal is very light, with practically nothing doing in the nature of export trade and domestic business easing off from week to week. Rolled oats are quoted at $2.50 to $2.60, in 80-lb. cotton bags, and oatmeal $3.00 to $3.20, in 98-lb. cotton bags, delivered, Winnipeg territory.

Rye Products.—The demand for rye products continues quiet and few enquiries are being received at the local mill. Quotations are: Best patent flour $7.00 bbl., in 98-lb. bags, medium $6.00, dark $5.00, and rye meal $5.00, delivered, Winnipeg territory.

Linseed Products.—The demand for these products is extremely light at the present time, and outside of a little export trade being worked to the West Indies there is nothing doing. Prices have declined about $1.50 for meal and cake, and oil 5c per gallon since last report. Present prices are: Meal $48.50 and cake $46.50. Raw oil is quoted at $1.10 and boiled oil $1.13 per gallon.

THE GRAIN MARKETS.

There has been a gradual rise in grain prices of late. On April 10, May wheat closed at $1.34⅝, fell to $1.32¾ on April 12, the lowest closing price of the week, and then worked irregularly higher and closed at $1.40⅝ on April 19.

The general situation has completely changed since the first of the week. On Saturday, April 15, while foreign markets were all closed, Chicago May wheat made a sensational jump of 9¼c, attributed largely to short covering. The American market acted as though it was heavily over-sold and Chicago traders, in attempting to buy to cover their sales, found practically no offerings and had to pay much higher prices to get wheat to fill their requirements. At the same time reports from their winter wheat areas were inclined to be bullish and added renewed strength to their already strong position. Winnipeg prices followed in sympathy and gained 3¾c.

The elevators at the head of the lakes are filled to capacity and it is estimated that there are fully five million bushels in cars in transit between Winnipeg and Fort William. This has caused the local trade to adopt a marking time attitude, but navigation was officially opened on April 19, and in conjunction with it the embargo has been lifted from wheat bound for Fort William, Port Arthur and Westfort. As the wheat is cleared away it seems natural to expect a more active trade to develop.

The United States Senate finance committee have issued a report on the permanent tariff bill, providing duties of 30c per bushel on wheat, 78c per 100 lbs. on flour and semolina, and 10 per cent. ad valorem on wheat mill feeds. The alterations in the tariff bill are so drastic that there is every prospect of a long and bitter fight, with the distinct possibility that the bill may not become law in any form for months to come.

Coarse Grains.—The coarse grains have been largely governed by the action of the wheat market. There has not been much interest shown in oats, only a little scattered business being done through domestic channels. American oats at their present difference are getting the preference in what export business is being done. Barley has been steady with only a light trade. Flax has been fairly active and local traders are of the opinion that the advance has been too rapid. Rye has been firm and quiet.

GRAIN COMMISSIONER TO RECOMMEND HUGE STORAGE ELEVATOR AT VANCOUVER.

Calgary.—Mr. J. T. Jones of the Board of Grain Commissioners, in passing through Calgary recently from the coast, reiterated his statements made at Vancouver regarding the grain handling facilities of that port. He stated that after going thoroughly into the matter with shippers and others, he would be willing to recommend the construction of a storage elevator for grain in Vancouver, if the government deemed it advisable.

"I have taken the question up with the Vancouver Merchants' Exchange," he said, "and I frankly told them that I wished to see Canadian grain handled through Canadian ports. As Vancouver is the only open Western port in Canada, it is reasonable to believe that I will do my best to help the port along."

Site to Elevator.

In reply to a question, Mr. Jones said that it was probable an elevator would be constructed on the

Kitsilano reserve, and thus provide a terminal for the Canadian National Railways. The suggested capacity was a million and a quarter bushels, but provision would be made to increase its size if this were warranted, the same as in the case of the existing elevator.

Mr. Jones repudiated the suggestion that the board has been averse to Vancouver as a shipping port for grain. As a matter of fact, the elevator storage and cleaning tariff there was the lowest in Canada.

The commissioner was still inclined to think that much could be done in the way of expediting the stowage of steamers. This, he said, was very essential if the port was to make any real progress.

WINNIPEG AND THE WHEAT BOARD.

Winnipeg.—That the report of the law officers of the Crown find the reconstitution of the Wheat Board with the same compulsory powers as the old Wheat Board to be ultra vires, and does not come within the power of parliament, was no surprise to the Winnipeg grain trade and such a result was fully expected. It may be stated that many of the best constitutional lawyers in Canada have privately expressed this opinion.

It is fully expected here that the investigation now being carried on before the Agricultural Committee of the House of Commons at Ottawa will proceed, and that the legality of the Wheat Board will now be submitted to the Supreme Court for a decision.

THE ONTARIO FALL WHEAT CROP.

Toronto.—Recent reports from representatives of the Ontario Department of Agriculture in western Ontario, indicate considerably more optimism in regard to the fall wheat and clover crop. Kent county reports that clover and fall wheat are apparently in good condition to date, and the prospects are that they will come through safely, so far as winter killing is concerned. It is noticed, however, that some damage has been caused by the Hessian fly.

Oxford and Lambton also report that the weather of the past week has been quite beneficial to the fall wheat and clover.

The finest flour made should never be placed under a cheap, shoddy brand, and in a weak and inferior sack, or it will not be a seller.

TRADE OPPORTUNITIES

With a view to assisting the Canadian milling trade in the development of a permanent and profitable export business, "Canadian Milling & Grain Journal" publishes in each issue a selected list of trade opportunities, the investigation of which should prove of value. "Canadian Milling & Grain Journal" is taking special pains to ascertain the reliability of each opportunity presented and will gladly furnish any further information regarding them that may be desired.

THE EDITOR.

No. 250.—Messrs. Isaac Modiano Bros. & Son, 5 Rangoon Street, Crutched Friars, London, E. C. 3, are in a position to handle Canadian flour shipments in the Near East.

No. 251.—Messrs. H. J. Stockton Company, Limited, 16 Philpot Lane, London, E. C. 3, are open to receive quotations, showing the total delivered cost, c.i.f. Shanghai, of full equipment for three flour mills of 500, 1,000 and 2,000 bags of 50 pounds per day capacity, respectively.

No. 252.—Pacific Trading Company, P.O. Box 234, 46 Yanaschita-cho, Yokohama, Japan, is in the market for export flour shipments and wishes to communicate with a responsible Canadian firm handling this product. Samples and lowest c.i.f. quotations desired immediately.

No. 253.—The General Commercial Company, Commission Merchants, P. O. Box 942, Havana, Cuba, would like to secure representation in the Cuban market for flour, oats, and bran, for direct transaction with the importing merchants of the island.

No. 254.—Mr. A. J. Nott, 59 Queen Charlotte Street, Bristol, England, would like to represent a good firm of Canadian grain exporters.

CLAIMS NEW WHEAT SMUTPROOF.

The Dalles, Oregon.—Wheat totally resistant to smut or bunt, something heretofore unknown to plant pathologists, has been evolved as a result of experiments conducted at the United States government experiment station at Moro. Superintendent of Station Stephens has produced four distinct varieties of wheat that are immune from smut, he said, and he has brought forth a number of hybrid varieties of great promise by crossing his smut resisting wheats with some of the most productive of the varieties now grown.

THE WESTERN MARKETS

The following report furnished by Messrs. Baird and Botterell, 103 Grain Exchange, Winnipeg, shows daily highest price levels from April 13, 1922, to April 26, 1922, inclusive.

	April 13	April 14	April 15	April 17	April 18	April 19	April 20	April 21	April 22	April 24	April 25	April 26	April 27
May Wheat	1.36	Good Friday, Exchange Closed	1.37 7/8	1.41	1.41	1.40 5/8	1.43 1/4	1.44 3/4	1.44	1.12 5/8	1.42 5/8	1.31 1/8	1.40 1/4
July Wheat	1.35		1.37 7/8	1.41 3/8	1.39	1.39	1.38 5/8	1.40 7/8	1.41 1/8	1.40 1/2	1.39 1/2	1.39 1/4	1.39 1/2
May Flax	2.35		2.36 7/8	2.38 3/4	2.36	2.37 3/4	2.42 1/8	2.47 7/8	2.50	2.51 1/2	2.48 5/8	2.44 3/4	2.41 7/8
July Flax	2.34 7/8		2.36 3/4	2.38 1/2	2.35 3/4	2.36 5/8	2.40	2.45 3/4	2.47 7/8	2.48 1/8	2.46 1/2	2.43 1/2	2.43 1/4
May Rye	1.03 1/4		1.05 7/8	1.07 1/4	1.06 1/2	1.05 5/8	1.08 1/2	1.09 3/4	1.11 5/8	1.10 3/4	1.10 1/2	1.10	1.09 3/4
July Rye	1.01		1.02 1/2	1.04 1/2	1.03 3/4	1.03 7/8	1.05 1/4	1.07 3/4	1.08	1.08 1/2	1.08	1.06 3/4	1.06 1/8
May Barley	0.67 7/8		0.68 1/8	0.69	0.67 7/8	0.67 3/4	0.69 7/8	0.70	0.69 7/8	0.69 1/2	0.69 1/2	0.69 1/4	0.69 1/4
July Barley	0.69 1/8		0.67 5/8	0.68 1/4	0.67 1/2	0.67 1/2	0.67 1/2	0.68 3/4	0.69 3/8	0.69 1/2	0.69 3/8	0.69	0.68 3/8
May Oats	0.49 1/8		0.50	0.50 3/8	0.50	0.49 3/4	0.50	0.51 1/4	0.51 7/8	0.51 3/4	0.51 5/8	0.51 3/8	0.51 1/2
July Oats	0.49 1/8		0.50 1/8	0.50 5/8	0.50	0.49 1/2	0.49 7/8	0.51 1/4	0.51 1/2	0.51 1/2	0.50 7/8	0.50 7/8	0.50 7/8

Foreign Flour and Grain News

The demand from English and Scotch importers for Canadian spring wheat flour revived somewhat recently, and as cables in some instances were stronger at a further advance of 6d per sack some sales were made for May shipment, but the volume of business was not large. There has been no improvement in the domestic demand for supplies, and the market in this respect is quiet, but the feeling is steady and prices are unchanged with car lots of first patents selling at $8.50, second patents at $8, and strong bakers at $7.80 per barrel in jute bags, ex-track, less 10c per barrel for spot cash.

The market for winter wheat flour remains very firm owing to the steady decrease in the supplies available.

European buyers appear disinclined to follow advancing prices, because quite recently the continent bought fair quantities and seem inclined to await developments.

Supplies of wheat for European consuming countries are assured this year, but the outstanding statistical fact is the current season's consumption will absorb all the 1921 crops—all the greatest part of the exporting countries' old reserves of wheat. This should tend to encourage growers, because it indicates a good demand next season for all wheat produced, seeing that present world's crop promise is below last year. Nevertheless, it is stated the world's demand for wheat next season will probably be moderately smaller than it has been during the current season.

ROUMANIA.—Good rains have recently been experienced, and have been of benefit to the winter crops. Spring sowing is actively proceeding, the soil being in splendid condition for receiving the seed.

INDIA.—The last official report states that crop prospects are practically unchanged.

ARGENTINA.—Further rains have benefited late maize.

AUSTRALIA.—The continued dry weather has caused a suspension of ploughing and sowing.

FRANCE.—Stormy weather has been experienced of late, and field-work in many districts has had to be temporarily abandoned. Opinions are rather at variance regarding the condition of the winter crops, but the prevailing weather is certainly unfavorable for growth, and many authorities maintain that a considerable amount of re-sowing has been rendered necessary by the recent frosts. Growers, however, are not unduly pessimistic, and granted favorable weather conditions, they are still very hopeful of a good outturn.

GERMANY.—Cold, frosty weather has prevailed recently, and snow has fallen practically everywhere. This weather is, of course, unfavorable for growth, and it also appears that the sharp winter frosts have done much damage to the crops.

ITALY.—The weather is cold and rainy. Sowing is proceeding actively in the south, and reports on the growing winter crops continue to be of a favorable character.

SPAIN.—Colder weather, accompanied by rain and snow in the uplands, has recently been experienced, but no damage to the crops has been reported.

JUGO-SLAVIA.—Good rains have recently fallen in practically all districts of Servia and Croatia. It is probable also that the rainfall has extended to Banat. Winter wheat has a fine appearance, and is very forward in growth. Most of the ploughing for spring sowing is now completed. Late reports mention some floods in the lower Slave district.

NORTH AFRICA.—Hot, dry weather is being experienced in Algeria, and is seriously interfering with field-work. Spring ploughing and sowing are, nevertheless, proceeding fairly actively on the high plateaux.

GREAT BRITAIN.—There is no improvement to note in the demand for either home-milled or foreign flour, and values are again lower. London reduced quotations 2s. (0.45) quite recently, but Liverpool maintained previous rates until lately, when "Bakers" was reduced 1s. (0.22½) per sack, other grades remaining unchanged. Foreign flour on spot is 1s. (0.22½) lower and meets with a very slow enquiry from bakers. Forward parcels are practically neglected.

ESTHONIAN FLAX EXPORTATION.

Esthonia.—The State monopoly of flax and linseed in Esthonia has been suppressed and the Esthonian Government has declared the sale and export of these articles free from restrictions. A special concession or license to export flax is not required, but both flax and linseed are required to be exported under certain specified marks which have been approved by the Ministry of Trade and Industry.

An export duty of 5 per cent., calculated on the invoice or on fixed standard prices, whichever is the higher, is levied on all flax exported from Esthonia.

HEAVY GRAIN STOCKS AT LAKES HEAD.

Over two thousand cars of grain are lying in the Fort William yards of the Canadian Pacific and Canadian Government railways waiting to be unloaded. An additional 800 cars are in the Port Arthur yards of the Canadian National railroads, making a total of 2,800 cars, containing roughly 3,360,000 bushels. The elevators at the head of the lakes contain over 46,000,000 bushels, making a grand total of grain in store at the head of the lakes of 49,360,000. It is estimated that 45,000,000 bushels of grain are required to feed the population of Canada for one year so that the grain at present stored in the two cities is sufficient in quantity to provide flour for home consumption for twelve months and have enough left over to plant part of a new crop.

It is not a question of having the money to fix a mill when out of order; but a question of not having a mill at all if allowed to run out of order.

The Elevator Operator

THE DESTRUCTIVE GRANARY BEETLE.

One hears much about the alarming condition that is caused by the presence of the weevil, which infests many of the grain centres of this country. When the word weevil is used, it is to be understood that the reservation is made as to generalities. There are possibly a thousand different species which are very near the beetle family in form. There are those who in preparing their own existence are likewise leaving a condition suitable for another species to take up the work where they have left off within the grain. Some of these finish their work on the exterior, while others confine their depredations entirely to the interior. From the standpoint of team work the job is well completed as they move on.

Even though there are many different species of the weevil, there is one tough, old bug that has distinguished himself as the terror of the race. This insect is commonly known as the grain beetle, and again as the grain or granary weevil. It is a very dark brown in color, and the head prolongs to a snout, which bears the organs of the mouth. Its larvae resembles a maggot; it is white in color and heavy in appearance. The larvae or worm does not possess feet or eyes. The method of operation consists of the female burrowing into the grain, then laying an egg, sealing it up, and proceeding to do likewise to all the grain possible, spends a lifetime on the job, which even though short, is wonderfully active.

NITROGEN VARIATION IN WHEAT.

The researches of two French scientists, Rousseau and Sirot, have shown that the quality of soluble nitrogenous substances contained in good flour is very nearly constant, and by this means the bread-making qualities of flour can be judged. Since stating this conclusion, they have analyzed wheat in all shapes of development including grain soaked by rain, to the time of germination.

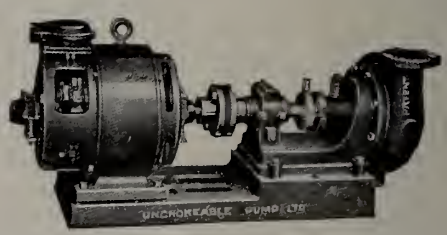
These analyses showed that the total nitrogen in the wheat varies but little; but its condition as to solubility differs greatly. At first, 40 per cent of the nitrogen is soluble, but as the grain ripens the percentage of solubility decreases until it reaches 9 or 10 per cent. Then it increases until about a fortnight before harvest, when it reaches about 14 per cent, which seems to be the stable condition of equilibrium when the proportion of soluble nitrogen is just right to make good flour. When the wheat begins to germinate, the percentage of soluble nitrogen increases rapidly to about 26 in the seed, and 52 per cent in the germ itself.

The imposition of any system of wheat control which would like its predecessor arrest the development of important basic industries and paralyze individual ambition and initiative, would be legislation which no government could possibly justify.

NEW UNCHOKEABLE PUMP ADAPTED TO ALL CLASSES OF PUMPING PURPOSES.

The choking of pumps operating on semi-solids, is an unpleasant experience with which most engineers are familiar; and the consequent cost of removing the obstruction, the burning out of motors in electrically driven pumps, or the slipping and burning of belts in belt operated installations, are serious items which pump manufacturers have long been requested to eliminate.

The Unchokeable Pump, Limited, have made these problems their special study and as a result of endless experiments have evolved a type of pump to deal with every possible contingency ensuring that whatever is capable of passing through the suction must of necessity be swallowed and discharged, and in a manner far better and far more economically than could possibly be the case from employing hand labor.



Unchokeable Pump With Motor Drive.

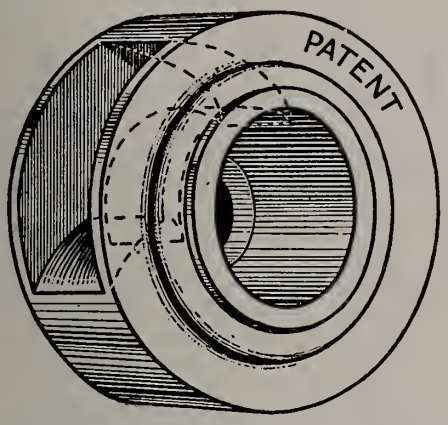
The Unchokeable Pump is constructed on the centrifugal principle but so designed that fibrous solids, skins, sacking, etc., will pass through it without difficulty. It is specially constructed to withstand the hard grinding work inseparable from the constant pumping of all kinds of sludge, fibres, semi-solid and solid matter. In principle the pump operates upon ordinary centrifugal lines, but in internal detail the pump differs from any other. No screens are necessary for large objects that pass through the suction will be ejected at the delivery. It is particularly designed to pass unscreened sewage, a most difficult material, rags, cotton waste, fibre and all kinds of pulp and trade effluent from textile work in general. It has been found impossible to make the pump choke with solids or semi-solids no matter how quickly or in what quantity they may be drawn into the pump.

Illustration No. 1 shows a pump complete with a motor drive, and illustration No. 2 shows the patent form of impelling. The pumps are motor driven with flexible couplings, these pumps are also made for a belt drive also vertical pumps are supplied. Parts are interchangeable and the impeller can be easily taken out and replaced. The bearings are ring oiled. The pumps are capable of dealing with anything from the pumping of coal, gravel, rock, ore, sand, etc., down to leaves, sewage of chemical composition of fluids whether containing acids or alkalis.

As a typical instance, the Unchokeable Pump, Limited, is supplying 6" vertical pumps with special impellers for sand and small stones for the Mersey

The Elevator Operator

Docks and Harbor Board. These are to be used for throwing up excavated matter containing small stones, 120'. These pumps, if only to throw to a height of 60', could have handled stones up to 5" diameter.



Patent Impeller of Unchokeable Pump

Messrs. Jones & Glassco, of Montreal and Toronto, are the sole Canadian agents for the Unchokeable Pump, Ltd., of London, England. They are also Canadian agents for the well-known Morse chain and report having an exceptionally large number of orders on hand.

Correspondence

WHAT ONE READER THINKS

In a recent editorial entitled "Legitimate Grain Speculation," "Canadian Milling & Grain Journal" sought to show that the system of speculation as practised by grain exchanges was quite proper and legal in that without such speculation the grain handling business of the country would be in a state of chaos. Reference was also made to bucket shop methods in the grain business and this with the dabbling of doctors, lawyers, merchants, and even office clerks in the grain market was roundly condemned, and its eradication by the grain exchanges or by other methods was strongly recommended.

Summing up its conclusions, "Canadian Milling & Grain Journal," in the editorial above referred to said: "The grain exchange is for the convenience of grain men, and to facilitate the function and distribution of grain, and the more nearly its transactions are limited to that class the less chance there will be of interference from the outside."

A correspondent who signs himself "Wheat Kernel" says: "Referring to your editorial 'Legitimate Grain Speculation,' in a recent issue of 'Canadian Milling & Grain Journal,' and having read with interest the facts therein set forth, I do not believe, if I might be permitted to express an opinion that the elimination of illegal grain speculation should be impossible.

"As the farmers raise the grain, the grain dealers, elevator companies market it, and the millers grind what they require. The surplus might, in order to prevent illegal speculation, be placed at the disposal of the Government for distribution either through a Wheat Board or a Government Selling Agency. The Winnipeg Grain Exchange is at present recognized as the concentrating point for the grain traffic from the prairie provinces of the West, but in spite of the efficient organization one finds there that a great deal yet remains to be done before illegal grain speculation can be wiped out. To this end, however, it would help somewhat if the firms carrying on business as brokers were done away with, and in place of them could be established a central brokerage bureau, under the control of the Grain Exchange executive, and supervised, if considered necessary, by the Federal Government. Another branch of the grain trade, which has no license at all for its existence, comprises the commission house. There are a sufficient number of elevator and milling companies to handle the entire grain crop of the west, and, sooner or later, these two powers will be compelled to exert their combined forces with the view to eliminating the commission houses. If the organization of the grain trade was boiled down to its four essential branches, viz.: Elevator Companies, Millers, Exporters and Central Brokerage Bureau, it would be impossible for any speculative element to creep into the operations of the Grain Exchange. In any case there would be no occasion for its existence.

"There is another matter. Country elevators are, perhaps, the chief factor in facilitating the rapid movement of grain from point of origin to terminal, and as there are upwards of 3,000 of these elevators in operation each season, the enormous capital invested is fully realized by those connected with the grain trade. If the elevator companies (including the milling interests), operating at once on both buying and selling basis, had entire handling and disposition of the crop, it would be conducive to the inauguration of a thoroughly up-to-date and heavier capacity elevator system, and an interlocking of interests whereby at points where from four to nine elevators exist, two or three at most could handle the business, those companies withdrawing at one point, as the result of this pooling arrangement, being favored at some other. As a final issue, the railroad companies would doubtless increase the construction of a larger type of steel cars, suitable for handling a heavy volume of business with minimum transportation cost, and thus another step forward would have been taken towards the perfecting of the grain handling system."

A trip to the dust laden cupola of most elevators, especially while grain is being handled, is a thing to be dreaded. The atmosphere can, however, be greatly cleared by the proper installation of a ventilator, thus helping to eliminate a fire hazard and at the same time protecting the health of the manager or elevator men.

Millers Unalterably Opposed to Compulsory Wheat Board

Editorial Note.—The following is a summary of the Canadian National Millers' Association case against the proposed re-establishment of compulsory wheat control. In pursuance of its campaign against any more savoring of government interference with the normal and natural functioning of the milling or grain handling industries, "Canadian Milling & Grain Journal" strongly endorses the views and conclusions contained therein.

While realizing the necessity of the wheat producer and allied interests working in harmony and assisting one another to the mutual advantage of each, there are however, many points of national importance to be considered with respect to the re-establishment of the Canadian Wheat Board as requested by the Council of Agriculture. Before any action is taken by the Government the following facts should be seriously considered.

According to the Order-in-Council establishing the Canadian Wheat Board in 1919 it provided that any wheat delivered by farmers to elevators or mills, loaded over the platform into cars, etc., immediately became the possession of the Board who made an initial advance per bushel for the wheat and gave the producer a certificate, certifying that he had delivered so many bushels to the Board and would be entitled to his share of the total profits made by the Board in disposing of the crop. His share was based on the number of bushels his certificate showed and before receiving payment must surrender this certificate for cancellation by the Board. These certificates were transferable.

The Board was also instructed to dispose of the crop at the best price obtainable both in the domestic or export market. They were also given control of flour and millfeed prices or the price at which the miller could sell to the baker his flour or consumer his flour and millfeeds. They had no control over the bakers' bread prices.

Trading in Futures Prohibited.

During the time of office of this Board all trading in futures on wheat was prohibited in Canada. The Board fixed a price to the domestic consumer which was changed only three times during the year and the exportable surplus was sold at the world market price governed by supply and demand.

If the Board controls flour prices will the mills be allowed to manufacture the many grades of flour now being placed on the market? Each quality of flour is produced to suit its buyer's needs. It would be impossible to put any price on these many different varieties and the Board would be forced to order the mills to make one grade only. The result would be that the poor man would pay the same price for his bread as the man of better means, whereas under conditions as they are to-day both have access to the quality of flour they feel they can afford. The wealthy man pays the high price for the highest grades. No one grade of flour can meet the demand of the public except as a war measure.

Again, will the Board permit the exportation of the various grades of flour that are necessary to meet the demands of the sixty different countries to which Canadian millers are to-day exporting? How can they? The result of the mills being allowed to mill only one grade of flour would mean a decrease in export business. This was proven under the old Board when exports of flour of one grade or quality decreased the exports some four million barrels under the previous year and during a period when the whole bread-eating world was clamoring for wheat and flour.

The figures given below are the official exports of flour in barrels of 196 lbs. from 1918-19 to Feb. 28th, 1922, and are totalled by crop years ending August 31st of each year. The Wheat Board was in existence during the crop year 1919-20.

	1921-2.	1920-1.	1919-20.	1918-19.
Sept.	360,959	309,926	462,757	387,107
Oct.	659,167	570,479	590,526	536,455
Nov.	855,957	744,169	784,951	555,036
Dec.	747,505	607,573	1,236,564	1,204,117
Jan.	631,821	703,641	367,712	995,931
Feb.	665,111	622,730	236,199	450,153
Mar.		820,730	236,195	606,689
Apr.		535,417	148,319	608,774
May		517,740	102,086	974,899
June		535,319	665,701	978,153
July		465,264	433,197	1,195,116
August		453,572	288,481	1,171,222
		6,866,560	5,552,688	9,663,657

What does this decrease in exports of flour mean? It means that for every barrel of flour that was not exported the dairyman and livestock man lost the use of 70 lbs. of millfeeds, namely, bran, shorts and middlings. This results in a decrease in the production of meats, butter, cheese and other dairy products, large quantities of which are exported from Canada. No substitute has ever been found that will take the place of millfeed for the production of the above mentioned commodities, at equal prices.

Disastrous to Live Stock Interests.

It must also be remembered that millfeeds enter into direct competition with all classes of cattle feeds. With a set price on bran, shorts and middlings what chances have either the millers or the consumer of these feeds against a feed made from coarse grain or the competition of imported feed corn from the United States, unless these feeds were also controlled by the Board? These feeds will fluctuate as market conditions warrant while the consumer who has to use millfeeds may be paying at times a fictitious price altogether out of line with competitive market conditions. Assuming this to be true the direct result would be disastrous to live-stock and dairy interests in the export market.

If proposed Wheat Board controls flour prices, they must control the price of millfeeds. What Board can state or decide what the relative value of any one of these products and by-products of wheat should be sold at? If millfeed were sold on the market value of wheat they would be around $45.00 per ton at Fort William to-day instead of $20.00 as is quoted at present. All these products in themselves fluctuate according to market conditions. As stated

before, what effect will an artificially high price on millfeeds have on the raising of cattle or hogs and the dairying interests and if the Board sets an artificially low price on millfeeds it will be to the detriment of the public, inasmuch as flour will be artificially higher.

If by any chance the set price of flour in Canada would be too high, is the consuming public going to be allowed to import a cheaper flour from some other country? Can the Board regulate its prices everyday to meet the fluctuation of the world markets, particularly those of the United States? How could this be done unless the Board undertook to sell every bag of flour or feeds manufactured or in short, take over the milling industry of Canada, an industry with 1200 different mills, with a capitalization of $80,000,000 and an annual turnover of $250,000,000 in grain products alone?

Why should the government fix on any one of the necessities of life for special treatment? The market for coarse grains, cattle and dairy products have all seen drastic declines in the past year. The Maritime Provinces depend to a great extent on their potato crop, the Province of Quebec, its hay crop and the Province of Ontario its mixed farming and dairy products. If the Government establishes a wheat board, will not the precedent established by this be sufficient for every interest to demand Government support?

A set price on bread would mean that the Government would be trying to make two absolutely opposite economic laws function side by side, the law of supply and demand in direct contrast with fixed prices. The world has seen enough of this to realize the folly of any such procedure, and to-day has reverted to the law of supply and demand. This also brings up a very serious question as to whether importers are prepared to deal with an individual Government agency when making their purchases abroad, or will they revert to other exporting countries for their needs, where they can make purchases from whom they like.

Supply and Demand Rule.

The world harvests a wheat crop every month of the year. The Argentine, Australia and India, all large exporters of wheat are selling their crops in the first five months of the calendar year. The United States and European crops follow and then Canada. These are countries which meet each other's competition all the year around. Can any one country by holding back their surplus affect these competitive conditions? It would be impossible to artificially enhance the price. Supply and demand would have to rule.

During the term of the late Wheat Board, nearly every importing country was buying its bread supplies through some form of a government agency. These nations have learned their lesson regarding government control and with the exception of Australia and Greece, the international trade in wheat and flour is being handled through regular trade channels at the present time. The old Board made the bulk of their sales through these government boards where large quantities were purchased at a time. The Board of to-day will have to dispose of the crop to many individual traders, whose chief interest is to make their purchases in the best possible markets.

The opinion of the Canadian National Millers' Association is that it is utterly impossible to operate the mills of Canada, under artificial control nor will the farmer receive any benefits from the same, and for these reasons they are unalterably opposed to the re-establishment of a compulsory Canadian Wheat Board.

PLAN BIG TARIFF BOOST IN U. S.

Washington.—The "agricultural bloc" in the United States have prepared a new tariff bill which will make the Fordney Bill look like the proverbial "thirty cents."

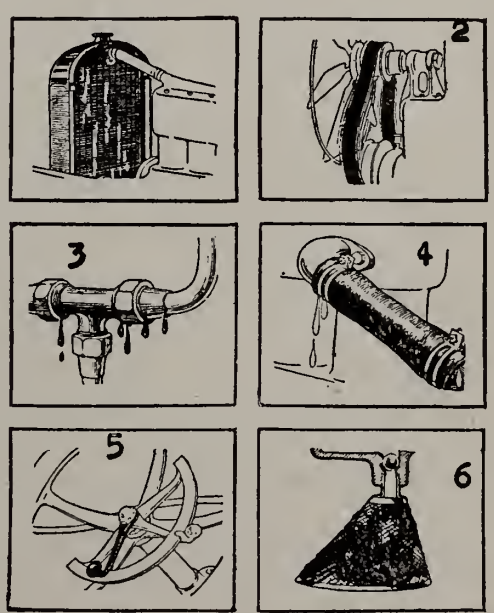
Senator McCumber, who has charge of the measure, states that the new bill (if it becomes law) will carry the highest protection for agricultural products in the history of the U. S.

A duty of 30 cents is fixed on wheat, which is 5 cents above the Fordney Bill and five cents under the emergency law. This is aimed particularly at Canadian wheat. The duty on flour is fixed at 70 cents per hundred, as against 50 cents in the Fordney Bill and 20 per cent. ad valorem in the emergency act.

Flax seed in the Senate bill is fixed at 40 cents a bushel, an increase of 20 cents over the House bill. Rye is fixed at 15 cents, or five cents higher than the Fordney Bill. Live stock and meat duties are increased over the Fordney level.

SIX REASONS WHY MOTORS OVERHEAT.

In view of the growing use of motor trucks by mills and elevators as well as by millers, elevator operators, and others engaged in the handling of grain, knowledge of the principal reasons why motors overheat, and which are illustrated herewith, should prove of interest and value.



(1) Leaking radiator; (2) Loose fan belt; (3) Leaking oil pipe; (4) Loose hose connection; (5) Retarded spark; (6) Clogged oil strainer.

Elevator, Mill & Personal Notes

Medicine Hat.—Considerable export orders have been received by the Medicine Hat flour mills lately, and up to the present time they have shipped 1,760 tons of flour to Europe, which is moving via the Panama Canal, and have yet to ship by that route 2,498 tons. They have also shipped 80 tons of flour to China and have about three hundred tons in sight for that destination.

Toronto.—Messrs. Wm. & J. G. Greey, 6 Church St., the well-known manufacturers of bakers' and other machinery, announce a further substantial reduction in the price of some bakers' equipment noticeably in connection with their line of sanitary one-piece bread pans, twin loaf pans, sandwich and cookie pans, tin counter and display pans. Messrs. Greey's up-to-date organization enables them to ship orders the same day as received.

Winnipeg.—It is understood that the property of the B. B. Rye Flour Mills, Ltd., is in the market. Unsatisfactory conditions in the export rye flour trade are said to be the company's reason for deciding to dispose of the plant.

Picton, Ont.—The grist mills of Messrs. Pyatt & Hart was destroyed by fire recently, with a loss of $20,000, which is partly covered by insurance.

Hampton, N.B.—Mr. W. H. Hill's grist mill, which had only been remodelled but a few months ago, and which was destroyed by fire recently will, it is understood, be rebuilt.

Glencoe, Ont.—Mr. A. E. Sutherland is erecting a chopping mill here.

Vancouver.—Grain shipments through Vancouver will total 5,500,000 bushels of wheat by the end of April, according to local elevator officials. The Vancouver Board of Grain Commissioners have recommended to the government that a grain storage elevator be erected, and the chief official of the government elevators has been in the city looking into needs in this regard.

Montreal.—The Steel Trough & Machine Company, Limited, Tweed, Ontario, are opening an office here to take care of their Quebec business. Mr. R. L. Welch will be in charge of this office and his address will be Room 216, St. Nicholas Building.

St. Jacob's, Ont.—Fire which at one time threatened the greater part of the village, completely destroyed the large plant of the Snyder Flour Milling Company here recently. The loss is estimated at from $75,000 to $100,000. The cause of the fire has not been ascertained. The loss at the flour milling plant includes 13,000 bushels of wheat and a large quantity of flour which was ready for shipment.

Newcastle Creek, N.B.—Fire recently destroyed the 25-barrel mill of Mr. W. P. Miller, at this place.

Dundas, Ont.—The Colville Feed & Milling Co., Ltd., has been incorporated to do business here.

Edam, Sask.—The Saskatchewan Elevator Co., Ltd., plan the erection of a new modern 30,000 bushel house here to replace the one lost by fire.

Mr. Matthew Snow, former secretary of the North West Grain Dealers' Association at Winnipeg, has been appointed to the Board of Grain Commissioners for Canada, to replace Commissioner W. D. Staples, whose term of office expired recently.

Mr. James Baxter has taken over the position as head miller with the Renfrew Flour Mills Co., Ltd., of Renfrew, Ont.

Mr. Lawrence A. Walker, who for eight years was connected with the Vancouver Milling & Grain Co., Ltd., of Vancouver, B.C., has gone to National City, California, where he will in future reside.

Messrs. James Richardson & Sons, Ltd., grain exporters, who are at present in the Board of Trade Building, Montreal, have leased the entire fourth floor of the new Furness House at St. Alexis and St. Sacrament Streets, and expect to be settled in the new premises early this month.

Mr. James Stewart, of Winnipeg, President of the Maple Leaf Milling Company, spent several days at the head office of the company in Toronto recently.

Mr. W. C. Omand, Royal Bank Building, was confined to his home with illness for several days recently.

Mr. M. A. Pollock, manager of the Canadian Flour Export Company, Ltd., spent several days in New York on business recently.

Mr. James Wilson, of James Wilson & Sons, Fergus, Ont., grain dealers and oat meal millers, and Mr. H. L. Rice, of the St. Marys' Milling Company, were recent callers at the office of the Dominion Millers' Association.

Mr. W. A. Matheson, western manager of the Lake of the Woods Milling Co., has returned home recently from a business visit to Montreal, Minneapolis and other points. Mr. Matheson, accompanied by Mrs. Matheson, expects to leave on a European trip during the coming summer.

Mr. R. R. Dobell, western manager of the Ogilvie Flour Mills, has returned to Winnipeg from a business trip to the West.

Mr. F. H. Palmer, junior trade commissioner, commercial intelligence service, department of trade and commerce, Ottawa, was in Fort William recently for the purpose of acquiring information in respect to the operation of grain elevators and the system of handling grain generally, and other industrial resources of Fort William.

Mr. W. R. Bawlf, president and manager of the N. Bawlf Grain Co., returned recently from a three weeks holiday in the United States. Mr. Bawlf was accompanied by Mrs. Bawlf and family.

Berwyn, Alta.—A 16,000 bushel warehouse is being erected here by the Alberta Pacific Elevator Co., Ltd.

Port Arthur, Ont.—The piling of the new concrete elevator which is being built here for Messrs. Parrish & Heimbecker, of Winnipeg, is completed and the pouring of the concrete has commenced.

CANADIAN MILLERS APPEAL AGAINST RAILWAY FREIGHT RATES DECISION

Claiming that they were being unfairly discriminated against by the present differential freight rates on ex-lake wheat milled into flour in Ontario and Quebec, as against flour milled at Fort William or West thereof, or flour milled from wheat after export, the Canadian milling interests appealed recently to the Privy Council at Ottawa against the Railway Board's judgment of March 6, 1922.

The judgment appealed against found "that the charge of 6.83 cents per 100 lbs. differential against flour over the export wheat rate from eastern lake port elevators is not 'unfair treatment to flour,' as against one cent per 100 lbs. differential to the same seaboard port on flour from Fort William and west thereof."

The millers' representatives before the Privy Council contended that "this discrimination against the milling industries east of the great lakes of 5.83 cents per 100 pounds handicapped the mills of Ontario and Quebec so as practically to put them out of the export flour trade on ex-lake ports."

The C. P. R. rate, it was stated, from Fort William to West St. John on wheat for export was 35½ cents per 100 lbs., and flour from Fort William to West St. John paid a rate of 36½ cents per hundred. Wheat from Goderich and Port McNicoll to West St. John paid a rate of 15.17 cents per 100 lbs., while flour, milled from the same grain, was charged 23 cents per 100. Mills in Ontario and Quebec, grinding ex-lake wheat into flour, were charged a differential 600 per cent. greater than mills at Fort William or west thereof, according to the millers' claims. This, they submitted, was unjust discrimination.

The millers asked that the judgment of the Board of Railway commissioners be rescinded, and that an order be made that flour be carried for export at a rate not exceeding one cent per 100 lbs. more than the export rate on wheat, "as the way the finding of the Board now stands there is nothing to prevent the railways in future from charging 6.83 cents per 100 more for the transportation of flour to the seaboard for export than wheat for export or from discriminating to the extent of 5.83 cents per 100 against mills east of the Great Lakes, grinding ex-lake wheat for export to the same seaboard port as all rail wheat."

Assured of Provincial Support.

The millers' representatives stated that they had the support of the agricultural departments of several provinces in their demands, and representatives of some of these provinces were present with the deputation, which pressed the appeal.

Mr. R. A. Thompson, of Lynden, Ont., president of the Dominion Millers' Association, who first addressed the members of the cabinet, claimed that in this case the Railway Commission had overstepped the bounds. It had become a machine to help the railways, instead of serving the purpose of protecting the industries and the consumer against unjust charges and unfair discrimination. What the millers of Ontario and Quebec asked, said Mr. Thompson, was a fair show to work out their own destinies. The operation of their mills and the grinding of Canadian wheat in Canada would be of benefit to themselves and to the whole Dominion. The railways would benefit because they would secure the extra rate on flour, as well as the higher local rates on a certain part of the flour and on the mill offal. The dairy industry, it was submitted, was handicapped, as well as agriculture generally by the fact that the mills could not operate to advantage, and there was a consequent great scarcity of millfeeds, such as bran and shorts.

At the present time the Ontario and Quebec millers were handicapped as against both the western millers and the millers in England. Because of the lower rate on wheat for export, the latter was given a bonus on every bushel of wheat he purchased for grinding.

The appeal was heard by Sir Lomer Gouin, Hon. W. C. Kennedy, Hon. J. A. Robb, Hon. E. Lapointe, Hon. Jacques Bureau, Hon. W. R. Motherwell, Hon. Charles Murphy and Hon. D. D. McKenzie.

The millers asked that the Governor-in-Council grant the relief asked, rather than refer the matter back to the Railway Commission for revision, "as the Board of Railway Commissioners apparently unanimously concurred in the judgment written by Commissioner McLean."

Legal Notes

Toronto.—The Great Lakes Steamship Company, recently sued the Maple Leaf Milling Company, Ltd., for $40,576 as a result of damage to the cargo of the "John Dunn" while in the slip of the milling company at Port Colborne. Justice Middleton found the Maple Leaf Milling Company liable, and directs a reference to assess the damages.

Winnipeg.—The Manitoba Court of Appeal delivered judgment recently in the stated case of the King vs. the Manitoba Grain Company, declaring section 215 of the Canada Grain Act ultra vires of the Federal Parliament. This section of the act stated that "no person shall engage in the business of selling grain on commission or receive or solicit consignments of grain for sale on commission in the western inspection division without first obtaining such annual license from the board."

The appeal arose from a conviction registered in the Provincial Police Court last year, when Magistrate R. M. Noble fined the Manitoba Grain Company $500 for selling grain without a license. The case has aroused considerable interest owing to the fact that the validity of the Canadian Grain Act was attacked by counsel for the defendant company. At the time of the conviction Magistrate Noble granted a stated case.

Beechy, Sask.—A standard 30,000 bushel elevator is being built here for the State Elevator Co., Ltd. Mr. R. O. Benel, of Moose Jaw, is the contractor.

THE PRACTICAL MILLER

SIMPLE METHODS OF EXAMINING INTERIORS OF FLOUR MILL SPOUTS.

Pull a suitable shaped brush through any one of the spouts in your flour mill and see what a fine collection of webs and dust you will bring out. Perhaps, also, there will be brought out a collection of animal and vegetable growths, mould or other fungi, together with some animal organisms living upon and among the vegetable growths.

Try as hard as you can with brushes and scrapers, you seldom remove nearly all the collection of web and dirt, some of which evidently remains in some spouts for months and years.

Probably the very best way of all for cleaning wooden spouts is to remove them and either tear to pieces, or else put them under the steam boiler and into its furnace as speedily as possible. That treatment will clean the spouts and kill all the vermin and microbes. Then replace the spouts with new ones made of galvanized steel and of such size that the spouts may be filled completely when working at ordinary capacity. Spouts too large for the service required of them are always hiding and breeding places for vermin and for their webs and nests.

Look Inside the Spouts.

By "rigging up" a bit, you can look into the far corners of the spouts and see just what, if anything, there is hidden away in the corners and in places never brushed clean by passing stock. Accompanying illustration shows how to examine the interior of a spout closely.

A mirror fastened to a wooden paddle by a few tacks is shown in the large sketch, also in a detail, and the paddle is shown pushed into the opening in a spout until the mirror stands at an angle of about 45 degrees with the length of the spout.

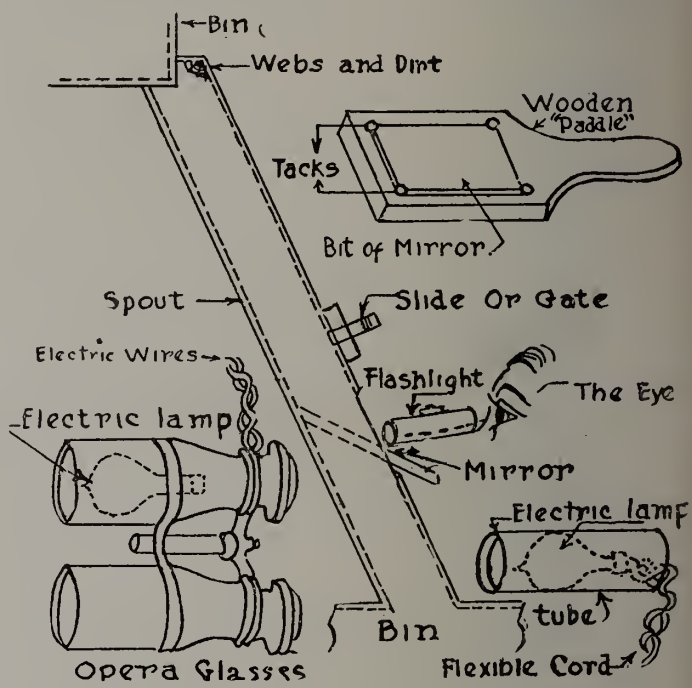
A source of light is then brought up, the eye is placed as shown, and the sight will fall exactly upon the portion of the mirror which is inside of the spout. Then the source of light — a flash-light or an incandescent lamp inside of a paper or metal tube is placed as close beside the eye as possible, and in such a manner that the light rays will fall fair upon the mirror, also at 45 degrees, same as the line of sight.

When held exactly in the right position, the mirror will reflect the light rays into the far corners or end of the spout and the eye-sight, by means of the mirror, will be able to follow in the same direction with the rays of light. A bit of care and a few minute's practice will enable you to so hold the light, and mirror that you can see clearly to the end of a spout to which the light-rays are able to penetrate.

One of the detail sketches shows a small electric light bulb enclosed in a paper mailing tube and wedged tightly therein. With a lamp thus fitted up, the tube can be held close beside the head with one hand while the other hand adjusts the paddle until the mirror is at exactly the right angle to send light and sight up the spout. When in exactly the right position, the mirror may be held fast by a wedge thrust into the spout beside of the paddle which carries the bit of mirror.

A certain practical miller, at one time, having a good deal of "spout-spying" to do, rigged up a special implement for that purpose, wherewith he was able to see the eggs or larvae of insects at the far end of a twenty-foot spout. A disabled opera glass chanced to be at hand and was pressed into service. One of the lenses had been broken, thus rendering one barrel of the glass useless. The broken lenses were removed and a small but powerful electric lamp inserted in the tube thus made vacant of lenses.

The eye was placed against the good barrel of the instrument and the light rays directed against the wedged-in mirror. By having the lamp axially fixed in the vacant barrel of the instrument, merely



bringing it into position so one could see into the spout, the light rays were automatically directed and it was very easy to bring the light rays, the sight rays, and the axis of the spout to coincide to a great nicety.

The magnifying qualities of the lenses were then brought into use and by means of the focusing screw, the vision was adjusted to the point in the spout where web or other material was to be seen and its utmost detail could be distinguished easily and plainly. By screwing out the tubes of the instrument, its focus may be adjusted to give perfect definition from any far distance, up to within three or four feet of the eye; and thus, with aid of the glass, very small objects inside a spout, or other inaccessible place, may be plainly seen and closely examined.

SETTING A SPOUT VALVE.

To set a spout valve accurately, run a bolt through one side of valve into the tongue and fasten. Screw an angle block to the side where bolt goes through to get a flat surface for the winged nut. The valve may be adjusted to suit the operator, and with a check nut over the winged nut there will be no danger of the streams varying.

THE PRACTICAL MILLER

COST SHEET FOR SMALL MILL.

Illustrative in a general way of articles which have appeared in past issues of "Canadian Milling & Grain Journal" relative to the establishment of cost accounting systems in small mills, the accompanying cost sheet should prove interesting. Millers, the smaller ones particularly, will never be able to progress in their business if they continue in the face of growing competition to try and ascertain proper selling prices by old rule of thumb methods. So scientific is the business of milling becoming that only those who adopt and practice the most up-to-date methods, both in milling and in cost accounting, can hope to survive.

The cost sheet shown is drawn for mills ranging from 25 to 50 barrels daily capacity. Ten per cent. is allowed for interest on investment, $2.13 per $100 for taxes on property, $150 per month for a day miller's and $75 per month for a second, or night miller's salary, fire insurance on $20,000, labor insurance at $120 per annum, 7 per cent. for depreciation on machinery and 2 per cent. for depreciation on building. Light, heat and power costs are figured at twenty cents per barrel though, of course, it must be understood that the figures given for interest, taxes, and other costs are purely imaginary, and are simply given to show how each individual small miller knowing what his plant is worth, what taxes and salaries he is paying, and other charges, can ascertain the overhead production cost of each barrel of flour he is making.

Cost Factors	50	45	40	35	30	25
Interest on Investment	.20	.22	.25	.28	.33	.40
Taxes	.01	.01	.02	.02	.02	.03
Labor	.18	.20	.22	.25	.30	.24
Fire Insurance	.01	.01	.01	.01	.02	.02
Labor Insurance	.01	.01	.01	.01	.01	.01
Depreciation—Machinery	.07	.08	.09	.10	.12	.14
Depreciation—Building	.02	.02	.02	.03	.03	.03
Power	.16	.16	.16	.16	.16	.16
Heat	.03	.03	.04	.04	.05	.04
Light	.01	.01	.01	.01	.01	.00
Total Production Cost	$0.70	$0.75	$0.83	$0.91	$1.05	$1.07

"Canadian Milling & Grain Journal" will welcome the views of any millers who have adopted cost accounting, and will be glad to give space to practical suggestions for the general information and benefit of the smaller members of the milling industry.

MILLING KNOWLEDGE AND GOOD FLOUR.

Mill production as applied to flour milling consists of producing flour and the natural by-products used as stock feeds. Very simple statement yet there is in this production of flour a multitude of things to do, and many hard and fast rules that have to be strictly adhered to in order to make mill production the financial success that it should be to anyone engaged in the milling business.

As time has gone on the requirements for flour of higher standards have been demanded. These demands for higher standards were not always first started by consumers but some flour producers improved their producing machine (namely, the miller and mill). No mill ever gets to producing better work only as its miller improves himself in knowledge and puts that knowledge into practice in the mill, or the owner of the mill changes millers and gets a better one—then will the production or output of the mill be improved in quality or yield or both.

The pioneers in advancing toward perfection in mill production are the men that made flour of a quality that would sell at advanced price over former standards. To-day, there are a great many good millers and good mills that are able to and do produce flours of the highest standard. This type of miller and mill is sufficient in number and volume to control the situation to the extent of making life miserable to the good mill manager who gets hold of a mill with a miller that cannot produce quality up to standard and at the same time make the proper yield from the grade of wheat being milled.

DON'T DRIVE SCREWS WITH A HAMMER.

Hammering screws about half their length in the wood and then finishing with two or three turns, is a common practice among millwrights and millers. A series of tests made on different methods of driving screws have proved that the full holding power of the screw can only be secured when it is screwed in all the way.

Driving screws in with a hammer breaks the wood fibres and if the joint is subjected to much strain the broken fibres are ground to powder and the screw ceases to hold. This may account for the dusting out of elevators and spouts. If it is desired to make a good job it is better to use fewer screws and drive them properly than to hammer-drive the usual number.

THE PRACTICAL MILLER

AN ATTRITION MILL WHICH EMBODIES MANY WORTH-WHILE FEATURES.

There are many factors that influence selection in the purchase of merchandise and machinery, especially in regard to the latter. For instance, reputation for dependability of both the machinery and the manufacturer; the number of years the product has been on the market; the service the machinery has rendered; the cost of upkeep; reduction of time and labor, the output and profits possible after installation. These are the matters that should be given careful consideration before the purchase is made.

The Bauer Bros. Co., Springfield, Ohio, manufacturers of Bauer ball-bearing attrition mills, whose advertisement appears in this issue of "Canadian Milling & Grain Journal" invite prospective purchasers and those interested in attrition mills to investigate the reliability of both manufacturer and the machinery made by them. Their factory has been in successful operation since 1874—forty-eight years. The mills, then known as Foos Scientific, now known as "Bauer," have made a most enviable record for quality of product, low up-keep cost and years of profitable operation.

These mills have many superior advantages such as ball bearings, self-tramming plates, safety quick release, force feeder, stuffing boxes in the casing around the mill shaft preventing dust from blowing into the moving parts of the mill, hinged mill casing affording easy access to mill heads, and many other worth-while features.

The Bauer Bros. Co., invites you to send for catalogue No. 105, which is just off the press.

A CONVENIENT FLOUR BOX.

A very convenient flour box to keep near the scale can be made easily by taking your extra packer tube and slipping a sack over the bottom of it, leaving the tube right side up.

This makes a clean weighing box as you can pull the tube out of the sack every few days and use the sack already filled.

It also helps to keep the tube clean when not in use, and further you have it close at hand when you want it as they are usually kicked around and knocked out of shape or used for other purposes. The tube can also be used for feed, etc.

THE CARE OF SMOOTH ROLL SCRAPERS

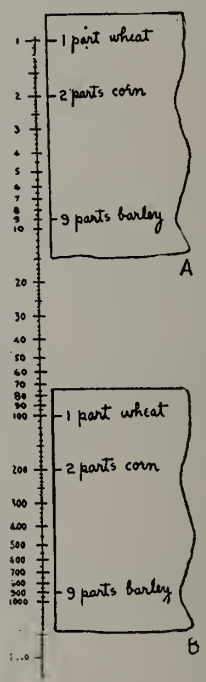
One of the difficulties with smooth rolls is in keeping the scrapers in order and up to their work. Instead of a scraper reaching the whole length of the roll, it would be better perhaps if they were made in short lengths, says, of 12 inches or less. These short lengths, slightly overlapping to prevent ringing, could be pivoted on a single rod, and if provided with separate, or individual, springs or counterweights, they would not only keep the rolls quite clean, but also be automatic in action and give little or no trouble.

A HANDY PROPORTIONING CHART.

Here is a proportioning chart for millers, grain men, or anybody else in the mill or elevator who must occasionally use mixtures, formulas, proportions, etc. It will be found extremely handy for multiplying or dividing mixtures of any kind. It is very easily applied to common examples.

Simply lay a slip of paper in position A as indicated and write out the formula—1 part wheat, 2 parts corn, 9 parts barley, etc. Mixtures in proportions similar to this are often required in various amounts.

To multiply the formula by 100 simply move the slip down to position B so that the 1 part wheat



falls opposite the 100. The chart shows, then, that 100 parts of this combination would require 100 parts of wheat, 200 parts corn, and 900 parts barley.

A very simple case has been purposely used here to explain the use of the chart. Its value becomes more evident when the formula embodies fractional parts of wheat, corn, etc., and when the multiplication is 95, 76, or some other odd amount.

The chart will be found to be very quick and accurate. It eliminates pencil figuring with possible attendant mistakes. It also eliminates guess work.

To multiply a formula, move the slip of paper downward. To divide a formula, that is, to make the quantity smaller, move the slip upward.

The greatest evil that handicaps the milling business must be the absence of a market for its product. Mill owners would not resort to price-cutting, nor suffer the indignities heaped upon them by unscrupulous buyers except for their extreme anxiety to market their flour. The next few years must bring either an increased demand or fewer mills.

THE PRACTICAL MILLER

A TIMELY EDITORIAL FOR THE SMALL MILLER.

There is no doubt whatever about it being a fearfully hard struggle at the present time for the small miller.

Competition is keen and there are scores of first-class salesmen doing their utmost to place their mill flour everywhere, and under all manner of conditions.

For the small mill to meet the present and near future severe competition, the small mill owner will have to have his mill on the very highest plane of milling efficiency; his yield must be below 4½ bus. per barrel of flour; he must be a first-class miller and manager, or must employ such.

He must cut his overhead at every point without detrimental effect to proper operation of the plant, and he must turn out a repeating product.

He must buy well, and he must sell well; and above all, he must sell to those from whom he can collect.

The greatest handicap to the small miller is lack of capital, and it is seldom they can make the mill profitable unless under very favorable conditions for trade.

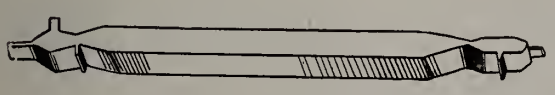
Now do not think for a minute you can allow a flour mill to run by chance and come out successfully, for never a bigger mistake could be made.

A mill must have the closest possible attention to be sure everything is working right, for there is always something requiring attention, and unless receiving that attention the flour is not going to be anything but a loser of steady trade, and this is one of the causes for the closing of so many mills.

Do not require of your miller the doing of every conceivable thing when he should be giving his attention to the machinery most of his time. It is poor policy to keep him away from his mill over fifteen minutes at an interval for the very reason that irreparable damage can be wrought in less time than that.

A SPECIAL SCREW DRIVER.

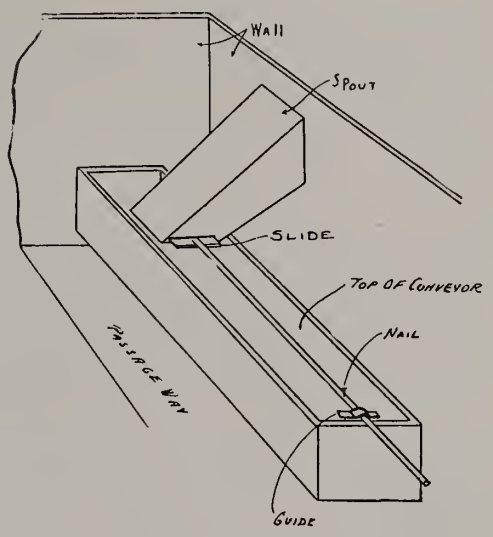
Here is an idea devised by a practical miller who found a number of screws on a purifier and some spouting which required adjusting but which could not be reached by an ordinary screw-driver.



An old ⅝-inch file was made as shown in the sketch. With this the holes in the slots in the screws could be manipulated in eight positions from the side of the machine with the additional advantage of plenty of leverage.

REACHING OUT OF THE WAY SPOUTS.

Grain spouts located in tight, out of the way places, can have the regulating slide made as shown in drawing. A handle long enough to reach to a convenient place is fastened to the slide and after the slide is set for the proper feed a nail is driven



in the handle on the inside of the guide and just as close as possible. Then the slide can be pulled without going back to the spout and the right feed will be given by pulling until the nail touches the guide.

A COMMON MILL TROUBLE.

There are many evils in the milling business which are bad and need fixing, evils from the standpoint of the practical miller (the mill owner must air his own troubles). Take a case of a 100-barrel mill which is all that can be asked for in equipment, management and good grain. The miller hired from the start is a good man and soon the mill is running full time and doing well. After a few years the good miller leaves the mill and the man who takes his place is a failure. He ruins the mill and the trade, reducing the business to little or nothing. Both men drew the same pay. The man who made the business a success did not get one cent more money for his time, did not have any better working conditions than the fellow who wrecked the mill. Now once more there is secured a good man who by real hard work and ability puts the ruined mill into condition to do good work and as a result brings the trade back. This third man gets no more pay than either of the others, while his task is far greater, his work harder and the suspicions of disgruntled customers are ever against him.

Show us a man who won't adopt new ideas simply because the ideas are not his own and because he is never ready to give credit to the ideas of others and we will show you a fellow who is bringing up the rear. When a man quits looking for new ideas — and a chance to better his own condition, then the sign is on him — he is slipping.

THE PRACTICAL MILLER

CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

FOR SALE—50-barrel Midget Marvel Mill with elevators, beltings, etc., and complete installation for flour mill plant. Also grain grinder, ton per hour capacity. Good reasons given for wanting to dispose. Will sell cheap. Terms given for satisfactory paper. Reply Box 145, Carleton Place, Ont.

FLOUR SALESMAN WANTED.—Well-known milling company wants representative for Maritime Provinces. State trade covered and particulars as to salary, etc. Reply Box 112, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED — By Head Miller, with 20 years practical experience in modern Canadian mills up to 4,000 barrels capacity. Can guarantee best results as to quality and yield on both hard and soft wheat, and maintain mill at highest point of efficiency. At present in charge of a 1,000 barrel plant. Reply Box 85, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

PRACTICAL MILLER with 23 years experience seeks position with plant having daily capacity of 250 barrels or upwards. Can furnish excellent references. Reply Box 82, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—A 50-barrel Midget Marvel Mill, also complete installation of a flour milling plant. In use about three months. Machinery must be moved from actual premises. Good price for cash. Reply Box 103, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Head miller, with twenty years experience in 150 and 275 barrel mills, and still employed, is desirous of making a change. Applicant is 36 years of age, married, and can furnish excellent references. Reply Box 84, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

SALESMAN WANTED for the Province of Quebec. State requirements, experience and salary wanted. Reply Box 102, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

CYLINDER COCKLE MACHINE wanted. Must be in good condition and reasonable. Reply Mr. Charles Wyild, Ripley, Ont.

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- FLOUR - IMPORTERS

London - - England

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GRAIN AND FLOUR IMPORTERS

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93 Hope Street, GLASGOW

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Archibald Hamilton William T. Scott

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70 Wellington Street - GLASGOW
CABLE ADDRESS "CALYPSO"

THE PRACTICAL MILLER

WATER POWER FOR SALE.—One thousand horsepower on three leading Canadian railways and Great Lakes waterway. Less than 5 per h.p. per year. Elevator close. Town of five thousand population. Situated in Old Ontario. Reply Box 111, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

POSITION WANTED as head miller in a small or medium sized mill. Applicant has had twenty years' experience. Thirty-seven years of age. Reply Box 110, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FLOUR SALESMAN, speaking English, French and Spanish, seeks connection with milling concern. Reply Box 106, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—Sixty Barrel Stratford flour mill, Allis Rolls, Whitlaw Flour Sifter, Packer, Cockle Machine, etc., all in good running order. Full particulars and price on application to The Pearce Co'y, Ltd., Marmora, Ont.

WANTED TO EXCHANGE—A 20-inch McLachlan Chopper for a 15-inch Moore or Vessot, after April, or will buy. Reply F. H. Robinson, merchant miller, Cookstown, Ont.

FOR SALE—Two Centrifugal Reels, No. 1, one Centrifugal Reel, No. 3, one Hexagon Reel, No. 1. All in good order. Built by the Stratford Mill Building Co., Ltd. Reply Messrs. W. A. Stuart & Son, Box 88, Mitchell, Ont.

FLOUR SALESMAN open for immediate engagement in the Maritime Provinces. Experienced. Reply Box 104, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—Flour mill properties, some operated by water power, others by gas engine and electric power. Write me before buying. Prices, $3,200 to $15,000. List your mills with me for sale. No listing charges and quick results if propositions will bear inspection. Apply E. Armbrust, Niagara Falls, South, Ont.

POSITION WANTED—Miller, thirty-seven years of age, is open to take charge of small or medium-sized mill, or to take position as second miller in large plant. Has had twenty years experience. Thoroughly familiar with all branches of milling. Can furnish excellent references. Reply Box 107, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

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IMPORTER
Flour, Grain, Feed, Oatmeal and all Cereal products
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LONDON (ENG.)
Cables: "Trontopri, London"
Codes: Riverside, Bentley, Baltimore, A B 5 & 6 editions and Western Union new 5 letter code.

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MONTREAL

THE PRACTICAL MILLER

The Question Box

With a view to making this department one of real service, "Canadian Milling & Grain Journal" cordially invites its readers to send in their problems to The Question Box. There are but very few millers or elevator operators who do not have worries in the proper conduct of their plants. It may be due to lack of experience or inability to trace cause and effect. The logical and sensible thing to do is to ask someone who may possibly know. Often he is not at hand, and still oftener the perplexed miller or elevator operator does not want to show his lack of knowledge. Under these circumstances he can address his inquiry to the craft through this journal. His name will not be divulged if he wishes to remain incognito. Someone is sure to reply who has had similar problems to meet or similar questions to ask. We guarantee to devote all the space necessary to the asking and answering of questions, so do not be backward in sending them in.

THE EDITOR.

QUESTION.—What would be the best installation of a roll exhaust spout, direct to the eye of the fan or draw through a settling chamber with conveyor in the bottom? We have an installation like the first, but it fills up the Perfection dust collector so soon. C. B.

ANSWER.—The trouble with the dust collector on the roll exhaust is that it is too small. The settling chamber simply relieves part of the load on the collector, but if the collector is ample in size no settling chamber is necessary. All settling chambers in a flour mill are more or less of a nuisance, and should be abolished as there is no need of them. L.

MILL MACHINERY SAFEGUARDS.

Bolts, flywheels, shafting and large gears in mills are often guarded by an open-work rather than a solid enclosure. Such guards should be so designed that no one can get his hand or his finger into the danger point even if he tries. If the guard comes within 4 ins. of any danger point, the opening should not be greater than ½ in. sq., which is small enough to exclude fingers. If more than 4 ins. away, which is about the maximum length of a man's fingers, the openings may be larger than ½ ins., but not larger than 2 ins. sq., this being small enough to keep out a man's hand. If a slatted construction is used the slats should not be more than 1 in. apart.

DO YOU KNOW THAT—

Canada is larger than the United States by 250,000 square miles; contains one-third of the area of the British Empire; is as large as 30 United Kingdoms, 18 Germanys, 33 Italys, is larger than Australia and twice the size of British India; has a boundary line of 3,000 miles between it and the United States; its sea coast equals half the earth's circumference; is 3,500 miles wide and 1,400 miles from north to south.

Is is any wonder we Canadians should feel proud?

The Duster

The teacher asked her class to explain the word "bachelor," and was very much amused when a little girl answered: "A bachelor is a very happy man."

"Where did you learn that?" asked the teacher.

"Father told me."

If ever the human race is lost it won't be for want of speed.

It may yet become necessary for the pedestrian to lay down a barrage of tacks before venturing across the street.

And just a few years ago, in Ontario and some other parts of the country we wot of, the word "prescription" had a good reputation.

"Do you really think that the tone of the parish has altered since I entered upon my work here, Mr. Giles?" asked the earnest young vicar.

"Indeed, I do sir," repied the old farmer.

"I am truly delighted to learn that my ministrations have been crowned with success," returned the vicar, with a gratified smile.

"Success ain't the word for it, vikker," exclaimed the simple rustic, "Ontil yew coom into the parish we never knowed wot sin was!"

No coward is small enough to hide behind a woman's skirts to-day.

Rufus Redd Dogg

(From the Squaw Creek Clarion).

"Dere Sir,—I wuz readin' 'n yure paper t'other day I think et wuz, er mebbe last week et wuz, thet Birds o' trade, Corn assassinations grain exchanges 'n other bodies corp'rate wuz rearin' up on ther hin' legs over th' move t' resserect Wheat Control as per th' request o' them grain growlers 'n th' west.

"As millers go I'm only a small fella, an' control wan way 'r 'nother wudn't touch me thet I'd notis et much, but I thinks ef a wheat board ez t' come th' same shud be barred fr'm fixin' anny garantee price; fr'm solicitin' furrin orders, an' fr'm interferin' in anny shape, manner 'r form with th' regularly constitooted millin' r' grain handlin' interests, such f'r instance, as th' exchanges 'r commission men. I'd also confine th' board t' issuin' not more'n thirty original, 'n thirty countermandin' orders a month. With these few restrictions I don't see ez a wheat board cu'd hurt annyone. I'll pay me subscrip ef ye run this . . . . mebbe."

RUFUS REDD DOGG.

Vulcan Grain Elevator Machinery

HAS STOOD THE TEST

The VULCAN IRON WORKS, Limited

ESTABLISHED 1874

WINNIPEG

CAMPBELL FLOUR MILLS
West Toronto

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CONCRETE
FOR PERMANENCE

Concrete—

An Important Factor in the Preservation of Grain

Economy in the handling of grain is dependent chiefly on its **complete** preservation.

A little dampness, a few rats, a fire —these will destroy in a few hours the grain it took months to grow and reap.

How important, then, to have for grain storage a type of structure which is capable of withstanding the ravages of fire, the deadly effect of dampness, the insidious attacks of vermin.

We have such a structure in the Grain Elevator of Reinforced Concrete. It is fire proof and water proof — it keeps out rats, rot and disease; it grows stronger as it grows older.

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Uniformly Reliable

We maintain a Service Department to co-operate in all lines of work for which Concrete is adapted. Our library is comprehensive and is at your disposal at all times without charge.

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CANADIAN
Milling & Grain
JOURNAL

VOL. III MONTREAL, MAY 15th, 1922 No. 8

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EASTERN SALES OFFICE

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MILLS AND WESTERN OFFICES AT

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5,000 BARRELS FLOUR
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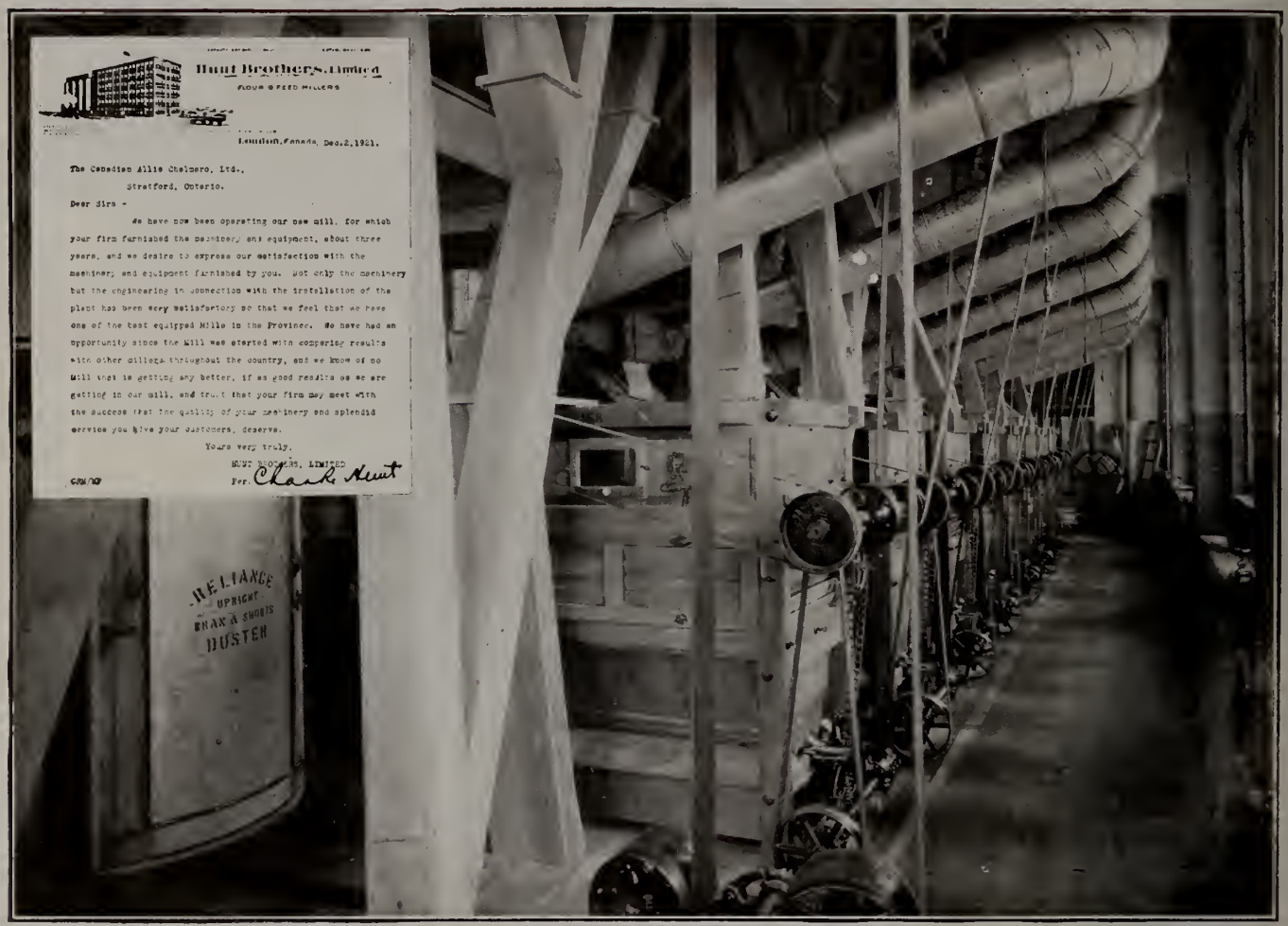
HIGHEST QUALITY

ROLLED OATS AND OATMEAL

Read Hunt Bros. letter regarding their Mill after three years continuous operation.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FLOUR & FEED MILLERS
London, Canada, Dec. 2, 1921.
The Canadian Allis Chalmers, Ltd.,
Stratford, Ontario.
Dear Sirs -
We have now been operating our new mill, for which your firm furnished the machinery and equipment, about three years, and we desire to express our satisfaction with the machinery and equipment furnished by you. Not only the machinery but the engineering in connection with the installation of the plant has been very satisfactory so that we feel that we have one of the best equipped Mills in the Province. We have had an opportunity since the Mill was started with comparing results with other millers throughout the country, and we know of no Mill that is getting any better, if as good results as we are getting in our mill, and trust that your firm may meet with the success that the quality of your machinery and splendid service you give your customers, deserve.
Yours very truly,
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SHAKER SHOE
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MAY WE HAVE THE PLEASURE OF INFORMING YOU OF THE SUCCESS THAT OTHER MILLERS ARE HAVING WITH OUR :: :: EQUIPMENT :: ::

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which are everywhere acknowledged to be

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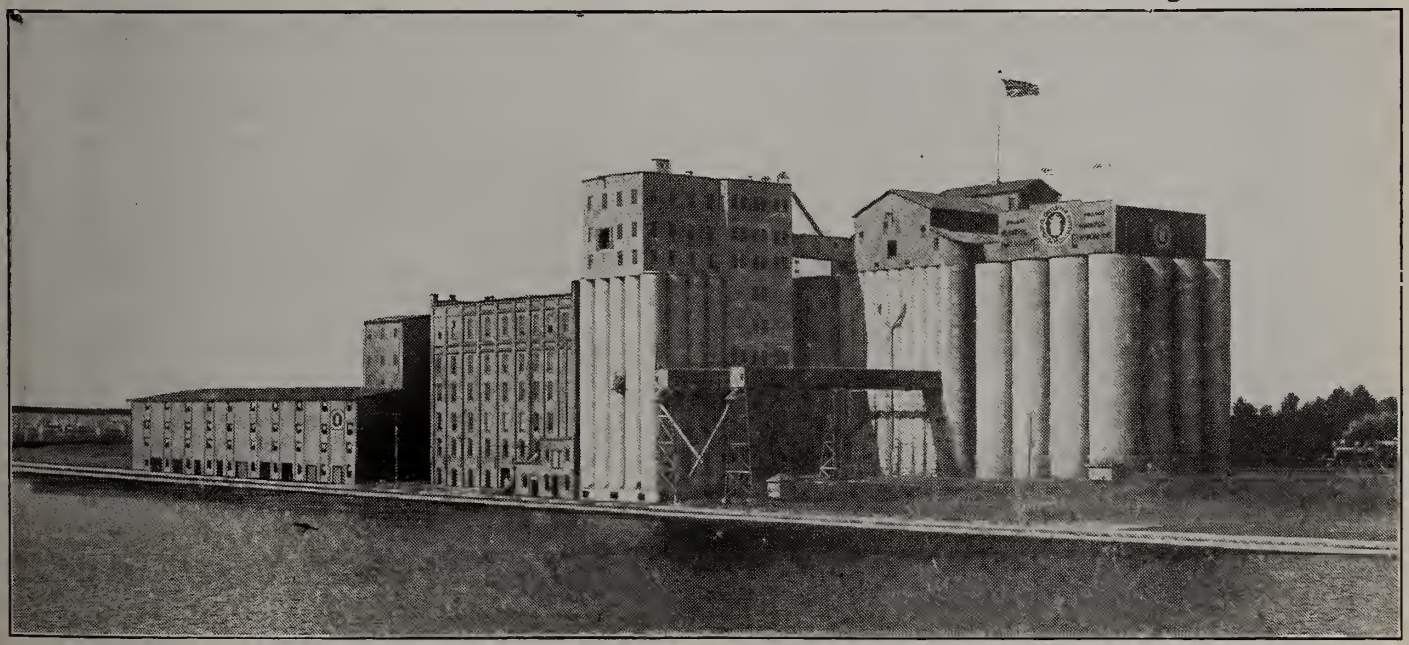

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The above is only one of the reasons why you should sell Garden Seeds in Bulk, and handled in the LEONARD WAY combining elegance in appearance, simplicity in selling method, and first, last and all the time, QUALITY.

The fact alone of giving more Seed for the money than in packets, will attract many Home Gardeners to your store and everyone that comes to buy Seeds is always a prospect for your other goods, and the satisfaction the seeds will give them by good results will keep them coming and thus make permanent customers of them.

The simple way of selling Bulk Garden Seed by our method will appeal to you. THE BETASCALE SEED MEASURING GLASS FIXES THAT.

We furnish beautiful Lithograph Labels showing each variety of small Seeds, also stiff cardboard labels for the Peas, Beans and Corn, telling whether early, medium or late, the height and whether green or wax pod, so that you need no seed experience whatever to sell the goods.
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A high grade bread flour sold in 98 lbs. bags and in 98 and 196 lbs. barrels.

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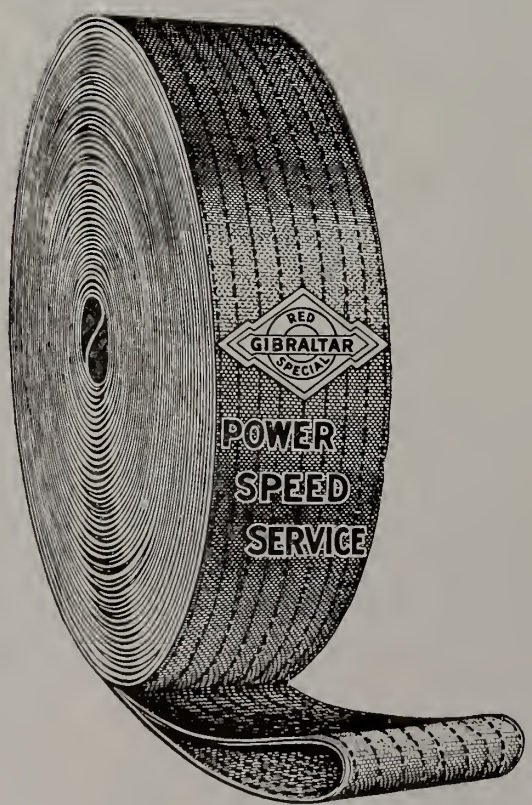

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"Gibraltar RedSpecial" Belting has been used extensively for a number of years in all industries throughout Canada, and has given universal satisfaction.

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Also, Makers of High-Grade Conveyor and Elevator Belts, Packing, Hose, etc.

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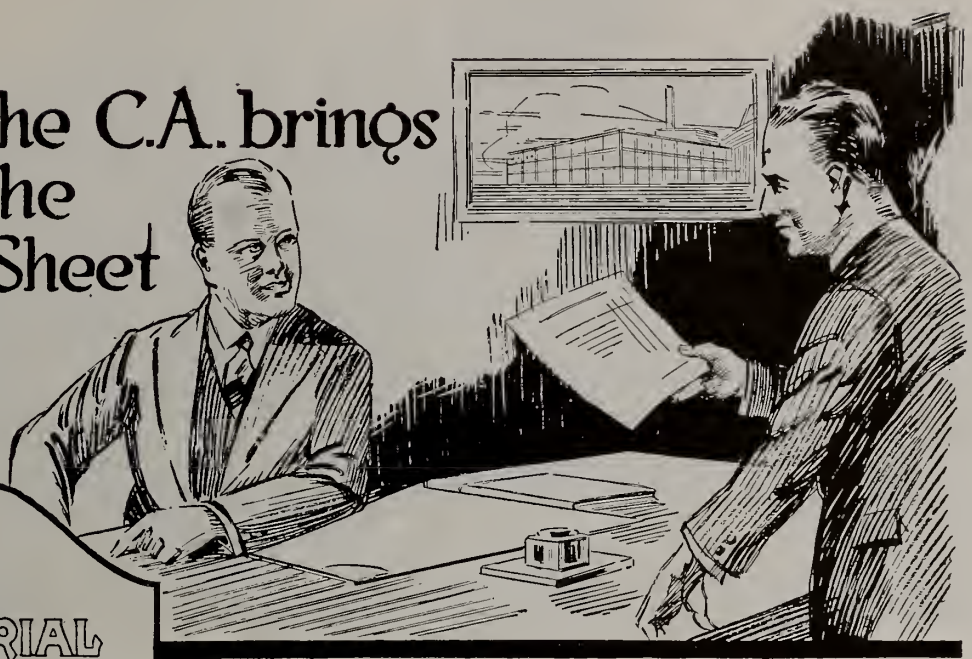

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The Cost Accountant's figures indisputably prove that Imperial Lubricants are a big factor in reducing plant maintenance and upkeep costs. On one item alone—depreciation—they often save their cost several times over.

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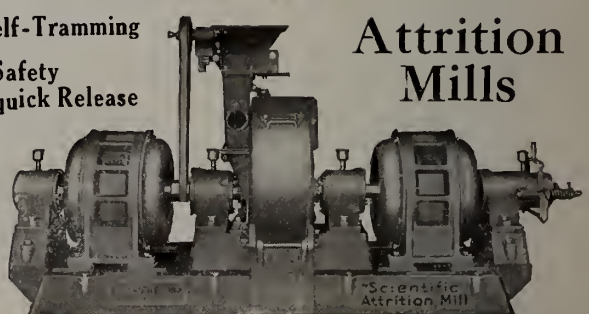

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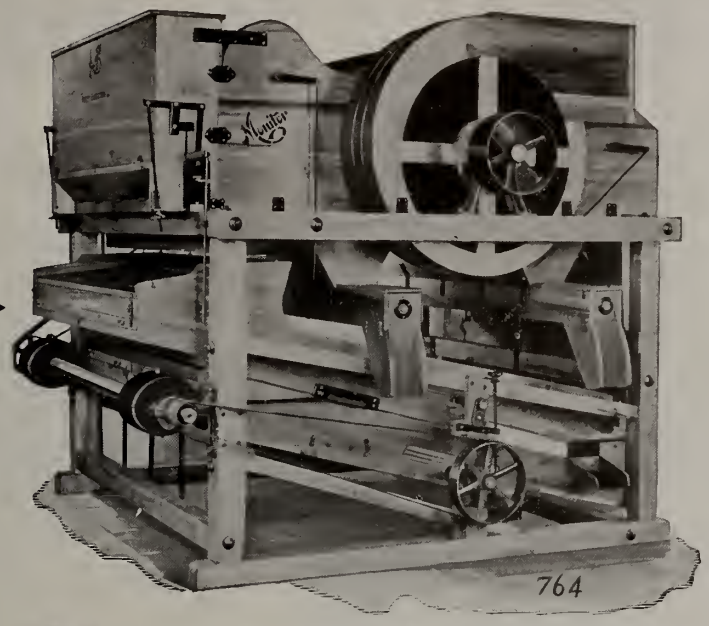

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THE NORTHWESTERN ELEVATOR
FORT WILLIAM, ONTARIO, CANADA
has selected its cleaning equipment.

It consists of

EIGHT NO. 9 B MONITOR SEPARATORS

Canadian built, for Canadian use.

Can you afford to adopt *any* cleaner without serious consideration of the MONITOR?

Such happenings as the above are frequent and convincing.

The Monitor
REGISTERED TRADE-MARK

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Special Agents for the Northwest
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RENOLD SILENT CHAIN DRIVES

Renold Chain Drives operating Grinders

Are Ideal FOR Grain Elevators AND Flour Mills

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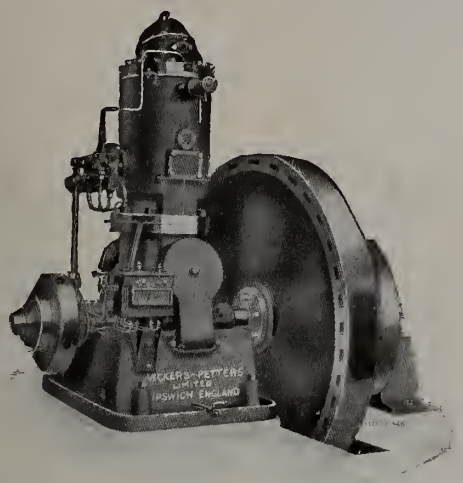

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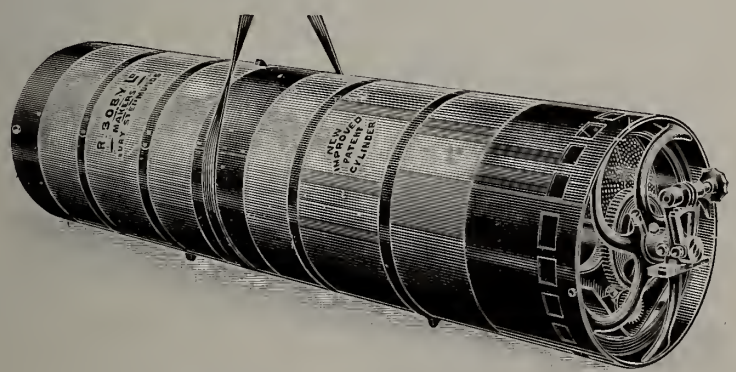

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British Manufacture

Used throughout the world in Flour Mills and Seed Warehouses. We make all sizes of Cylinders and drill all sizes of Indents. Especially efficient for cleaning Clover and Grass Seed, etc.

We supply complete Cylinders, or Plates only, or New Covers for Old Cylinders; also Single Cylinders, or in batteries of any number and with or without frames.

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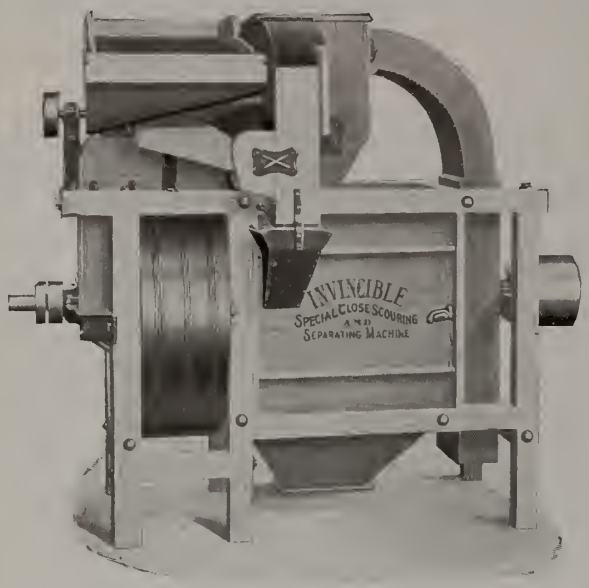

If you are indifferent about the way your grain is cleaned, you are neglecting the most important operation in your mill.

Good Grain Well Cleaned—
What's the Answer?

No matter how many scourers you now have and use, scour your wheat on an INVINCIBLE after tempering. All up to date millers temper their wheat.

An INVINCIBLE gets all the dirt the others leave.

The Invincible Grain Cleaner Company

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Morse Silent Chain Drives

Operate in practically all Grain Elevators and Flour Mills in Canada is because of their Frictionless Rocker Joints. Oil Baths not necessary.

Immediate deliveries.

Write for Catalogue.

Jones & Glassco, *Reg.*

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MONTREAL
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CANADA CEMENT
CONCRETE
FOR PERMANENCE

View of Peerless Cereal Mills Ltd. Woodstock, Ont.

CONCRETE

Keeps the grain dry—therefore

The Proper Material for Elevators

THE conservation of grain demands that it shall always be kept dry. One of the advantages of Concrete that its users first discovered was its wonderful waterproof quality—a quality which ensures the "dryness" of any article stored in a reinforced concrete structure. It is largely due to this that grain elevators of Concrete were erected in all parts of Canada; until to-day we have a series of these huge structures extending from the Western prairies which grow the golden grain, to the Eastern terminals where the grain is kept ready for export.

There are other features of Concrete almost equally important to the grain business. It is fireproof, and rat proof. Moreover, it readily adapts itself to the various types of tank and elevator most suited to the local conditions—is readily moulded to the shape and proportion its designer desires for the particular purpose for which the structure is intended.

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CANADIAN Milling & Grain JOURNAL

Montreal:

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VOL. III MONTREAL, MAY 15TH, 1922. No 8

CANADA'S ONLY MILLING AND GRAIN PAPER

Energetic Support Needed.

IT is gratifying to learn that through the Canadian National Millers' Association steps have been taken with a view to securing an immediate removal of the discriminatory rate on export flour shipments from Canadian ports. At the present time exporting millers shipping through Canadian ports on vessels flying the British flag are compelled to pay five cents per hundred pounds more than the rate in force between American and English ports.

At a recent conference between representatives of the executive of the Millers' Association and the steamship interests the latter were fairly and squarely asked to remedy a state of affairs which is seriously handicapping the development of the Canadian flour export trade. Consideration of the matter was promised by the steamship men.

"Canadian Milling & Grain Journal" has, since its inception, vigorously spoken for the placing of the flour export rate on an equal level with that prevailing for wheat and in view of the fact that the National Association has now taken the matter up "Canadian Milling & Grain Journal" urges that every miller in the country will accord his wholehearted support to the association in their efforts to finally settle a difficulty which has been the cause of so much loss.

Oil Engines in the Mill.

THERE seems to be no doubt in the minds of small millers who have used them that oil engines will make a barrel of flour with less fuel cost than other prime movers. However, fuel cost is only a part of the cost of production; and unless the oil engine can be depended upon to give continuous and reliable service it may prove far less efficient than steam or electric motors.

The relative cost of steam and electricity varies with the locality, though the operating costs with the latter is usually the lower. Both are fairly reliable and satisfactory from the operative miller's standpoint, but it is not probable that it would pay to discard a good steam outfit and purchase a new installation of motors.

Drastic Action May be Necessary.

WITH the president and the vice-president of the former Wheat Board coming out flat-footed in favor of compulsory control and the deputy minister of justice, despite the opinion to the contrary of the minister of justice himself and other high law officers of the Crown that compulsory Wheat Control can be legally re-established, the need for watchfulness on the part of those whose interests are threatened becomes more and more apparent.

That there is but little possibility of any consideration being shown the milling industry in the framing of any legislation to introduce compulsory control is evident from some illuminating remarks which were made before the Agricultural Committee of the House of Commons recently by Mr. F. W. Riddell, vice-president of the former Wheat Board in answer to Hon. H. H. Stevens, M.P. for Vancouver Centre.

Despatches quote Mr. Riddell as saying that **wheat control in order to be operated successfully would have to be compulsory.** Furthermore, **it would be essential for a wheat board to control the export of flour. Control of the export of flour by the millers,** Mr. Riddell is also reported as having said, **would be setting up a form of competition unless the millers were prepared to accept daily fluctuations of wheat prices as a basis for their export prices of flour.**

The Canadian milling industry is altogether too important a national asset to be made the football of any group, political or otherwise, and it is a certainty that legal steps will be instituted to frustrate any attempt to put anything over on the milling or the grain handling industries now or at any time in the future.

Take Cut-Offs More Frequently.

IT is claimed by expert accountants who have made an especial study of the office systems of Line Elevator Companies that to eliminate shortages and conserve expenses, the cut-offs of the elevators should be more frequently made; at the present time the majority take cut-offs twice during the season; this is insufficient. There should be at least four made during the season. This may seem unnecessary, but sufficient proof of the saneness of periodical cut-offs will be evident in the checking of shortages. There is a gradual leaning along these lines by the larger companies and is proving to be an economical means of safety.

Cross-Purposes and the Feedingstuffs Act.

WHILE the Canadian flour milling industry is only too anxious and willing to co-operate with the Federal administration regarding the effective operation of the Dominion Feedingstuffs Act, there can be no getting away from the fact that due to the application of different Provincial Governments for special rates on screenings and the granting of these special rates has given a distinct preference to elevator screenings as compared with mill feeds.

The question of price enters into the purchasing of any cattle feed regardless of its value as a feed and the actual difference on freight on shipments from Fort William as between mill feeds and screenings, would amount to $2.50 per ton, this representing entirely the difference in freight rates. The mills while, it is understood, take exception to the interpretation of certain sections of the Feedingstuffs Act have no object in putting out poor feeds, and it is, after all, only common-sense to appreciate the fact that manufacturers of feeds or of anything else must produce what the public demands or go out of business.

In an editorial entitled "A Conflicting State of Affairs" in its issue of March 1 last, "Canadian Milling & Grain Journal" referred to "the complications which have arisen between the Federal and certain of the provincial governments in the matter of the application of the Feedingstuffs Act."

"Canadian Milling & Grain Journal" pointed out that certain provincial governments in order to save the agricultural interests in their jurisdictions entered into arrangements with the railways under which were provided cheap rates on screenings from Fort William to the Bay ports with the object of providing a low price feed for livestock. These rates are still in effect and so long as they are continued just so long will the work of the Dominion Government in endeavoring to apply the provisions of the Feedingstuffs Act to the satisfaction of all concerned, be handicapped.

Successful Mill Management.

THE successful management of a flour mill includes many qualifications other than that of producing a saleable brand of flour. A good miller must know how to turn out the best quality of flour possible with the least expense, direct or indirect. He should be able to keep records which can tell him to a fraction of a cent the cost of every item entering into the making of a barrel of flour or a bag of feed from the time the wheat is received at his mill until the finished product is sold.

Cost accounting is but one branch of the knowledge which will be needed by the successful miller of the future. There is also the practical and scientific information to be acquired as well as a general familiarity with the principles of research work, and how could the miller of the present or the practical miller of the future be better provided with an opportunity for obtaining an education such as that described, other than by a school maintained for the purpose?

Needless to remark, such a school would be of immense value to mill owners and executives generally for it would be a source from which they could recruit new blood into their organizations with the certainty of knowing that the training of the graduates turned out by the school had been conducted on a most thoroughly efficient basis.

The Value of Cost Accounting.

WHILE cost systems will not change conditions in the mill, they will at least show in what direction millers are sailing and how their sails should be trimmed. They stimulate new energy in the direction of keeping costs below selling price which cannot be said to be the tendency to-day. No mill, no matter how small, can afford to be without some system that will give results. If the experience of past years cannot be shown in actual figures then that experience is largely lost, and no cost system, unless properly separated into its component parts can be valuable for statistical purposes.

Interesting articles on the application of cost accounting to flour milling appeared in Canadian Milling & Grain Journal issues of March 15 and April 1 last. These, and other articles which will appear from time to time should be carefully read and preserved for reference.

An Immutable Law.

DURING the present period of industrial reconstruction when every move on the part of employers to readjust their wage bills to meet changed conditions is greeted with protests and threats of strikes and walk-outs, it would undoubtedly help employers in their thankless task were they to impress upon their workers, in a friendly way, the economic reasons behind their actions.

The immutable law of supply and demand aided the wage-earners of this and other countries to secure the increases in remunerations gained by them since 1914. The same law is utterly impartial in its operations and irresistible in its rulings, and employers are no better able to defeat it than wage-earners.

The greatest gains to the wage-earning class have always come in obedience to the law of supply and demand. When business was booming, Capital was earning good returns and the accumulations were being invested in the expansion of industrial works thus creating new demands for labor. It is impossible for an industry to grow and attract labor to it without increasing wages. The Canadian industry is one of many which has grown rapidly, and in order to supply itself with adequate labor has been obliged to pay abnormally high wages. Incidentally it might be added in amplification of the above not a single dollar of capital can be put to use without the employment of so much more labor, but when the inevitable reaction follows a period of extraordinary prosperity when every dollar that can be saved has to be put into a reserve to meet overhead charges which are not being made out of the profits accruing from reduced business, then the demand for labor slumps and wages as a natural corrolary do likewise.

The Set Screw is responsible for more accidental deaths in elevators and mills than any other device found in those plants. Particularly is this true of country houses where the engine, transmission, head pulleys and cleaner pulleys are a constant source of danger. Better place a few guards now while making the other seasonal repairs.

EASTERN PROVINCES

MONTREAL

Dubrule Building
Phillips Square

Tel. Plateau 1983

MONTREAL MAY 15TH, 1922

THE MONTREAL MARKETS.

Flour.—The demand from English importers for spring wheat grades of flour has been somewhat better of late and some fairly large sales have been closed for May-June shipment. The domestic market has been, and is, very active, there being a steady demand from local and country buyers for small lots, and on the whole a satisfactory volume of business is being done. First patents are selling at $8.50, second patents at $8.00, and strong bakers at $7.80 per barrel, in jute bags, ex-track, less the customary 10 cents per barrel discount for spot cash.

There have been no developments of note in the market for winter wheat flour. The undertone of the market, however, has been firm. Local dealers assert that it is difficult to secure sufficient supplies from Ontario millers to meet the requirements of the local trade unless they are willing to offer prices which their customers do not feel disposed to pay. Car lots of choice grades are being quoted at $6.90 per barrel in second hand jute bags, ex-track, while broken lots are selling at $7.15 per barrel, ex-store, with winter wheat patents at $7.65 to $7.90 per barrel, ex-store, in new cotton bags. The trade in white corn flour is slow and prices are unchanged from last report at $5.00 to $5.10 per barrel, in jute bags, delivered.

Millfeed.—A good steady trade continues to be done in most lines of millfeed, and the market is fairly active with a firm undertone owing to the fact that supplies are apparently none too large to meet the requirements. Sales of car lots of Manitoba bran are being made at $32.50, and shorts at $33 per ton, including bags, ex-track, while smaller quantities of bran in mixed car orders are selling at $28.25, shorts at $30.25, and middlings at $32.25 per ton, including bags, less 25c per ton for spot cash, and pure barley meal selling at $38 to $40, pure grain moullie at $38, and feed cornmeal at $35 per ton, including bags, delivered. The trade in rolled oats is quiet and prices are unchanged at $3 per bag of 90 lbs. for standard grades.

Baled Hay.—The tone of the market for baled hay remains firm under a steady demand for supplies, and a fair trade is being done with sales of car lots of good No. 2 timothy at $29 to $30, No. 3 timothy at $27 to $28, and clover and clover mixed hay at $24 to $26 per ton, ex-track.

Grain.—There has been some improvement of late in the Liverpool market in the trade in wheat, and buyers seem more disposed to pick up the cheap offerings of both Manitobas and Argentine wheats, and a moderate business is also reported in new crop American winter wheat. This, however, does not tend to increase the demand from foreign buyers for Manitoba wheat in this market as business is again very quiet, and the few firm bids that have come forward recently for No. 1 Northern for nearby and May shipment were 5c to 6c per bushel under first cost here.

W. A. BLACK APPOINTED DIRECTOR OF DOM. ALLOY STEEL CORPORATION.

The appointment of Mr. W. A. Black, vice-president and managing director of the Ogilvie Flour Mills Company, Ltd., to the directorate of the new Dominion Alloy Steel Corporation which is being organized for the purpose of erecting a modern alloy steel plant at Sarnia, Ont., was announced recently.

Mr. Black has been taking an increasingly active part in industrial affairs in Canada, more particularly since coming East from Winnipeg to be Vice-President and Managing Director of the Ogilvie Flour Mills Company, Limited. He is also a Director of The Molsons Bank, the Abitibi Power & Paper Co., Dominion Textile Co., and the Kaministiquia Power Co.

Mr. Black's earlier training was with the Grand Trunk and Canadian Pacific Railways. He joined the Ogilvie Flour Mills Co. as far back as 1884. He was appointed Secretary in 1887, General Manager, Western Division in 1902, General Manager of the entire organization in 1911 and Vice-President and Managing Director in 1912. He served as President of the Montreal Board of Trade for the term of 1918-1919.

WILL FURNISH CLEANING EQUIPMENT FOR NEW SOUTH AFRICAN ELEVATORS.

The S. Howes Co., Inc., of Silver Creek, N.Y., manufacturers of grain cleaning equipment, have been awarded the contract for the grain cleaning machinery, dust collectors and packers which will be required for the two terminal houses which are to be erected by the Railways and Harbors Administration of the Union of South Africa at Durban and Cape Town, respectively.

For the Durban Terminal there will be supplied three Eureka Steel-covered Compound Elevator Separators capable of handling 1,500 bushels of corn, or 2,000 bushels of wheat hourly; a Steel-covered Eureka Four-Sieve Special Separator for handling screenings, equivalent in size to a standard 1,000-bushel machine. There will also be a 600-bushel per hour Eureka Conical Corn Scourer of the armored type; a Steel-covered Iron King Automatic Dust Packer and Eureka Cyclone Dust Collectors for all the cleaning machines.

For the Cape Town Elevator the S. Howes Company will furnish three No. 407 Eureka Compound Elevator Separators of the steel-covered type, a No. 945 Eureka Four-Sieve Special Screenings Separator; this, too, will be armored, as will also be the No. 80-A Eureka Conical Corn Scourer.

LESLIE C. BRINE

Grain Trimming and Bagging

TELEPHONE St. Louis 6397F MONTREAL TELEPHONE St. Louis 6397F

PORT OF ST. JOHN HAD SUCCESSFUL YEAR.

St. John.—The record of business at the Canadian winter port of St. John during the season recently closed, indicates a decided betterment in the Canadian export business. Indeed, the situation has proved more satisfactory and encouraging than was expected when the season opened last November. The feeling now is that the bottom has been reached in so far as world traffic through the port is concerned, and that from now on a gradual, though perhaps slow, improvement may be anticipated. Ever since 1918, when St. John reached its highest peak in the export trade—the figures that year amounting to $200,783,647—there has been a gradual drop in export figures. In 1919, they were $149,986,167; in 1920, $111,966,931; and in 1921, $81,138,006. The figures for the fiscal year of 1922 have not yet been made public.

During the past winter season increases were shown in such export commodities as grain, flour, sugar, automobiles and live stock. Lumber and general cargo have not exhibited much change, but the prospects are bettering.

Through the C. P. R. elevators 11,369,179 bushels of grain were exported this winter, leaving 124,787 bushels still in the elevators. This quantity will be sent out within the next couple of weeks. The winter previous, the C. P. R. grain export figures from the port were 9,414,460 bushels. The C. N. R. have sent out through their elevator this winter 3,041,647 bushels, compared with 1,957,428 bushels the previous season.

The number of steamers arriving at St. John this winter was 206, as against 178 the previous season. There was also a considerable number of schooners and other small craft.

The Canadian Pacific Steamships had fifty-one passenger and freight sailings from the port. This company have started out on two new routes—one via Boston to Jamaica and the other to Holland. The Canadian Government Merchant Marine had fifty-one freighters at the port, operating four distinct services and several along special lines. Fifteen steamers of the Head Line operated through the port this winter. The Manchester Line was represented by eleven steamers. The Royal Mail Steam Packet service had twelve sailings to Bermuda and the West Indies from St. John. The services to South Africa, New Zealand and Australia were also maintained, but the number of ships was not as large as in past years.

TRADE OPPORTUNITIES

With a view to assisting the Canadian milling trade in the development of a permanent and profitable export business, "Canadian Milling & Grain Journal" publishes in each issue a selected list of trade opportunities, the investigation of which should prove of value. "Canadian Milling & Grain Journal" is taking special pains to ascertain the reliability of each opportunity presented and will gladly furnish any further information regarding them that may be desired.

THE EDITOR.

No. 255.—Mr. A. H. Baker, 22 Ridley Gardens, Toronto, Ontario, who has 21 years experience in export trade, would like to get in touch with Canadian firms desiring a representative to handle their export business.

No. 256.—Messrs. Noale & Wilkinson, Limited, 15 Camomile Street, London, E.C.3, who are engaged in the shipping and forwarding business, and who have also an indent department, are in a position to represent Canadian flour interests, both for the United Kingdom market and for ovreseas.

No. 257.—Messrs. A. Ugazio & Figlio, Galliate, Novarra, Italy, ask for c.i.f. general prices on flour made from Manitoba hard winter or red winter wheat. This firm is willing, if prices are right, to take from 200 to 300 tons monthly. Samples are requested.

No. 258.—Mr. I. N. G. A. Dubernard, Dir. Gen., C. Nat. Migicana de Dinamita y Explosivos, Calle Leys, Mega II, Mexico City, Mexico, wants supplies of flour from Canada.

No. 259.—Mr. William Scott, 401-4 Corn Exchange Building, Hanging Ditch, Manchester, England, would like to receive offers of flour from Canadian exporters.

BIG LOCAL GRAIN MOVEMENT PREDICTED.

Montreal. — Following an announcement that more than 250,000 bushels of grain had reached this harbor from Chicago within 12 hours, port authorities expressed the belief that last year's phenomenal deluge of American corn might be duplicated this season. Forty million bushels were shipped to Montreal last season because of the favorable rail and water rates.

THE CHICAGO MARKETS

The following table compiled from figures furnished by Messrs. Logan & Bryan, members of the Winnipeg Grain Exchange and the Chicago Board of Trade, C.P.R. Telegraph Chambers, Montreal, show highest price levels recorded on Chicago Board of Trade from April 28, 1922, to May 12, 1922, inclusive.

	April 28	April 29	May 1	May 2	May 3	May 4	May 5	May 6	May 8	May 9	May 10	May 11	May 12
May Wheat	1.43	1.43⅞	1.42	1.43⅝	1.46	1.45⅜	1.42⅝	1.39¾	1.38	1.39¼	1.38½	1.45¼	1.46
July Wheat	1.26⅞	1.27¾	1.28½	1.28⅞	1.29¼	1.28¼	1.26⅞	1.25	1.24¾	1.24⅞	1.24¾	1.27⅛	1.27¼
Sept. Wheat	1.19	1.19¼	1.20	1.20¼	1.20⅜	1.20	1.18¾	1.17½	1.18¼	1.18½	1.18¼	1.20¼	1.21⅛
May Corn	0.61½	0.61⅞	0.61⅞	0.62¼	0.63	0.63¼	0.62⅞	0.61⅞	0.61⅞	0.61¾	0.61⅛	0.61¾	0.61⅛
July Corn	0.65¼	0.64¾	0.65¾	0.66	0.66½	0.66⅜	0.66	0.64⅞	0.64⅜	0.64⅝	0.64½	0.65⅜	0.66
May Oats	0.37½	0.37⅜	0.37⅜	0.37⅜	0.37⅞	0.37⅞	0.38¼	0.37¾	0.37¼	0.37⅛	0.36⅞	0.37½	0.37¼
July Oats	0.40½	0.40⅜	0.40¼	0.40¼	0.40⅝	0.40½	0.40½	0.40⅛	0.39⅞	0.39¾	0.39¾	0.40¼	0.40⅜
May Rye	1.08⅞	1.09	1.08½	1.08¾	1.10	1.09⅞	1.09⅞	1.09¼	1.09⅛	1.09¼	1.09¼	1.10	1.10⅛
July Rye	1.04⅞	1.04⅞	1.04½	1.05⅛	1.06	1.06	1.06⅛	1.06	1.06	1.06⅛	1.06¼	1.06¾	1.06¼
May Barley	0.67	0.67⅛	0.67⅛	0.67¼	0.67¼	0.67½	0.67½	0.67⅛	0.67¼	0.67¼	0.67⅛	0.67¼	0.67½

ONTARIO

TORONTO

TORONTO MAY 15TH, 1922

THE TORONTO MARKETS.

Flour.—The export business in flour continues very quiet. Manitoba flour is quoted at from forty-three shillings and six pence to forty-five shillings and some sales have been made at these figures. United Kingdom importers are not keen buyers and seem to think that prices must decline in the near future. There is very little doing in Ontario winter wheat flour for export, prices still being beyond an export basis. The market for Ontario flour is quiet, quotations ranging from $6.25 to $6.40, Toronto and Montreal freights. Recent advices received by the Toronto flour trade indicate that stocks in the United Kingdom are abnormally low and that buyers will have to come into the market for flour very soon. There are indications that certain combination or individual interests are at work in the United Kingdom to keep imported flour out. In addition to that there is a decided lack of confidence by United Kingdom buyers in our Canadian market, the feeling existing over there that they are being manipulated. In some sections of Ontario there are some fairly heavy stocks of flour on hand, due to the fact that dealers bought flour in mixed cars somewhat in excess of their immediate requirements in order to take advantage of the splendid premiums on mill feeds. Mixed car prices for mill feeds were three and four dollars a ton lower than the prices quoted in straight cars. In other sections stocks of flour are not heavy and the condition is generally described as spotty.

Millfeeds.—Premiums are still being offered at $3 a ton on bran and $1 a ton on shorts, with the following mixed car quotations prevailing: bran $28.00; shorts $30.00; feed flour $1.90; white middlings, $34 to $36. The latter is the popular feed at the present time. There is a good demand for bran, shorts and white middlings, although feed flour is somewhat heavy on the market.

Oil Cake.—With the low price of feeds and the coming of the grass season the demand for oil meal has fallen off considerably and there is very little business passing. The prevailing quotation is $52, Toronto and Montreal freights.

Grain.—Due to the ready absorption of deliveries on the May option the wheat market locally has been showing an upward trend during the past week or ten days. At the present writing, however, demand for May and cash grain is easing off perceptibly. Export demand, as well as domestic enquiry is somewhat light. Farmers have been light buyers of feed grain and this appears to be due to lack of funds while local dealers report millers to be very cautious in their wheat purchases. Ontario wheat continues very scarce with some dealers, who are bidding a good price, stating that they were unable to obtain supplies. There is said to be considerable congestion at the elevators at Port Colborne, due to the heavy receipts of American corn there, which, in the absence of canal tonnage from Montreal, is piling up rapidly. Grain carriers, which can navigate the St. Lawrence canals, are on their way up from Montreal, and it is due to their non-arrival that stocks of grain at Port Colborne have already accumulated to such an extent. A few days ago there were as many as fifteen boats ready to unload at that port. In addition to corn, the movement of wheat from the head of the lakes has been heavy lately. Western oats have been selling to Europe in fair quantity. Manitoba wheat, No. 1 Northern, is quoted at $1.53½; No. 2 Northern at $1.48 and No. 3 Northern at $1.40. The prices on Manitoba oats are: No. 2 C. W., 60½ cents; No. 3 C. W., 55¾ cents; extra No. 1 feed, 56¾ cents; No. 1 feed, 56¾ cents; all c.i.f., bay ports.

Seeds.—The best quality Government graded recleaned seeds are nominally quoted at the following selling prices: Alsike, per cwt., $20; red clover, per cwt., $29.50; red clover, late mammoth, $31.50; timothy, per cwt., $11; alfalfa, Ontario, per cwt., $31.

Oatmeal and Rolled Oats.—There has been some enquiry for oatmeal for export, but United Kingdom prices are still out of line with values in the Ontario market. From advices received in Toronto it would seem that the United States can offer the product cheaper than Canada for shipment to the United Kingdom by reason of the lower freight rates procurable on steamers sailing from United States ports. Rolled oats are quoted at from $3 to $3.10.

MAPLE LEAF MILLING CO.'S PRODUCT WINS VICTORY CUP AT GLASGOW SHOW.

Toronto.—A cable received recently at the head office of the Maple Leaf Milling Company, Ltd., announced that "Queen of the West" and "Nelson" brands of flour manufactured by the company and handled by Messrs. T. D. Russell Baird, Ltd., flour importers, 73 Robertson St., Glasgow, had again lifted the Victory Grand Challenge Cup at the Glasgow Exhibition. Last year's performance of these brands at the same show resulted in the winning of the cup and thirty-three medals, and this year the victory carries with it eight gold medals, seven silver and four bronze medals. This year there were over 4,000 contestants at the baking competition in Glasgow where the Challenge Cup was won.

OVERAGE CHARGES BEING CONTESTED ON GROUNDS OF ILLEGALITY.

Ottawa.—A statement in regard to the payment to the government of monies by terminal elevator companies on account of excess overages was made in the House of Commons recently by the Minister of Trade and Commerce, in reply to Thomas Sales (Progressive, Saltcoats). Hon. J. A. Robb stated that for 1920 weigh-up payments had been made to the government for overages by the Empire Elevator Company, Grand Trunk Pacific Terminal Elevator Company, Port Arthur Elevator Company, Thunder Bay Elevator Company and Saskatchewan Co-operative Elevator Company. The Eastern Terminal Elevator Company owes $49,027 to the Government on this account for 1920. For the 1921

weigh-up the following is a list of companies and the amounts owing: Canadian Pacific Railway Company, $29,184; Conso'idated Elevator Company, $3,432; Western Terminal Elevator Co., $47,907; United Grain Growers, $41,970; Grand Trunk Pacific Terminal Elevator Company, $5.697; Northwestern Elevator Company, $2,331. Companies which have not made payments on overages are contesting the right of the government to these payments and the matter is at present under consideration by the Department of Justice.

The Clause in Dispute.

The case for the government for the recovery of overages depends upon the question as to whether Clause 7 of Section 95 of the Canadian Grain Act is ultra vires. The clause reads:

> In the month of August in each year, stock shall be taken of the quantity of each grade of grain in the terminal elevators; if in any year after the crop ending the 31st day of August, 1919, the total surplus of grain is found in excess of one quarter of one per cent. of the gross amount of the grain received in the elevator during the crop year, such excess surplus shall be sold annually by the Board of Grain Commissioners and the proceeds shall be applied towards the cost of the administration of the Canada Grain Act.

The manager of one of the elevators at Fort William, Ont., which has paid the sum asked for by the Board, states that his company and others who have paid the amount of money asked for, have done so under protest, and the question of the return of this money, if the clause was ultra vires, would come up when decision was given. He said that the weighing in and weighing out of the grain into and from the elevators was all done by government weighmen and the companies took the stand that any overage which ensued, after the government had weighed the grain in and out, was the property of the company and the government had no interest therein.

In accordance with the clause, the Board of Grain Commissioners sent bills for the amount alleged to be due them from the elevator companies, and one or two, of which the Eastern Terminal was one, declined to pay. The Board may test the validity of the Act by entering suit and the result of that suit will decide the liability of the other firms, and whether money already collected shall be returned to them.

No mill should be left alone for over 15 minute intervals, for very serious and costly damage can take place; in fact, a running mill ought to have constant attention to keep it in correct operation.

The Modern Sophocles

Never trust a boastful man; when the fighting is on the ground, he will be up a tree.

Slander, like a stone, gathers more mud the farther it rolls. Never help to roll it.

If you wish to give a man a push, do it on the up grade; the other grade is easy.

Do not keep your eyes too steadfastly fixed on the stmbling steps of your neighbor; you may fail to see the block before your own feet.

Do not think the world would come to a standstill without you. It was moving for thousands of years before you entered it, and it will still move on when you have gone.

COMMENTS ON MILLING STOCKS RISE.

Toronto.—Canadian milling stocks, The Board of Trade News, the official publication of the Board of Trade of the city of Toronto, observes: have distinguished themselves, showing an unbroken line of advance during the month and heavy gains since June, 1921. All the milling companies are in a favorable position now. They were able to buy wheat at relatively low levels and both export and domestic business has been close to normal. Ogilvie made the largest gain during the month, but Maple Leaf registered the largest advance since June last.

SUCCESS DEPENDS ON COMPULSION.

Ottawa.—F. W. Riddell, vice-chairman of the former Canada Wheat Board, and general manager of the Saskatchewan Co-operative Elevator Company, informed the House Committee on agriculture at a recent hearing that in order to be completely successful, a reconstituted Wheat Board would have to be compulsory.

"The further you go from compulsory measures, the less effective the Board will be," he declared, in answer to H. H. Stevens (Conservative, Vancouver Centre).

The success of a voluntary Board depended entirely on the support extended to it. It would also be essential for a Wheat Board to control the export of flour. Control of the export of flour by the millers would be setting up a form of competition, unless the millers were prepared to accept daily fluctuations of wheat prices as a basis for their export prices of flour.

Uneven rolls are invariably caused by uneven feeding and grinding, and they ought to be fed in a sheet from end to end to keep an even surface.

SEND US YOUR NAME

To be listed in the Free Milling Directory of Canadian Flour Mills, managers, superintendents, head and second millers, and engineers.

IF YOU WANT TO BE INCLUDED

We must have your name and other particulars on accompanying form. Kindly fill in and return promptly.

Superintendent .....

Head Miller .....

Second Miller .....

Name of Firm .....

Address .....

Daily Capacity .....

Power Used .....

WESTERN PROVINCES

WINNIPEG

WINNIPEG MAY 15TH. 1922

THE WINNIPEG MARKETS.

Flour.—There is not much change to report in the flour trade situation. Domestic demand is showing a little improvement with the coming of spring and field operations now being in full swing throughout the West. Export trade, so far as Western Canada is concerned, appears to be at a standstill, although enquiries are on the increase with prospects bright for some business being worked in the near future, especially if the wheat markets should become steady or work a little lower and come more in line with overseas' ideas. The general situation, however, is quiet, and few mills in the west are running more than 50% capacity. There has been no change in flour prices since last report, present quotations being as follows: top patent spring wheat flour $8 bbl., seconds $7.40, first clears $6.80, jute mixed cars, 30 day terms, delivered at any point between Fort William and the western boundary of Manitoba. In 98-lb. cotton bags, prices are 20c over the jute basis. Saskatchewan points take 10c under these prices, and from eastern Alberta to the Pacific Coast values rise progressively to $8.30 for top patents at Vancouver and like points. Vancouver Island takes $8.35 for top patents and Prince Rupert $8.50.

Millfeed.—The demand for millfeed is exceptionally good at the present time due to the opening up of farm operations and the much needed precaution against the grasshoppers, bran being largely used for mixing with the poison that the governments and municipalities use in fighting these pests. As a result of this demand the volume of trade worked in bran is sufficient to use all available stocks. Shorts are also selling well. Prices remain unchanged, quotations being: Bran $22 per ton and shorts $24, in bags, delivered, Winnipeg territory.

Oatmeal.—The demand for rolled oats and oatmeal continues very quiet, and little is doing outside of light ordinary domestic trade. Prices have been enhanced 25 cents per bag due to the advance in the oats market. Present prices are: Rolled oats, $2.50 to $2.85, in 80 lb. cotton bags, oatmeal $3.25 to $3.45 in 98 lb. cotton bags, delivered Winnipeg territory.

Rye Products.—This market is reported as very dull by the local mill, with the export trade almost reaching the vanishing point. Quotations are: Best patent flour $7.00 per bbl., in 98 lb. bags; medium, $6.00; dark $5.00; rye meal $5.00, delivered Winnipeg territory.

Linseed.—Demand for cake and meal continues fair both from export and domestic sources. Since last report prices have declined about $5.00 per ton, present quotations being: Oil cake $43 per ton, and meal $45, in bags, carload lots, mill points. Smaller lots are quoted slightly higher. Raw oil is quoted at $1.00 per gallon, and boiled $1.03.

THE GRAIN MARKETS.

The wheat market, during the last five days of April and opening days of May, was generally steady and the May future only spread 4⅛c, during the ten days, the lowest closing price being $1.38½ on April 29, and the highest $1.42⅝ on May 3.

During the latter part of April, many interests who had accumulated large stocks of May wheat, liquidated their holdings and prices fell under the pressure of heavy offerings. Considerable export inquiry, however, tended to give the market a firm undertone, England and Greece being good buyers during the latter part of April and France, Italy and Germany showing interest in the opening days of May.

Conditions in the American winter wheat and Canadian spring wheat areas have been very favorable, the winter wheat outlook becoming much more optimistic and the Canadian spring wheat getting off to an excellent start.

During the first ten days after the opening of navigation, there was a considerable trade going on in the higher grades of cash wheat, but with the entry of the May contract month, the wheat was absorbed by traders to cover their May contracts and the cash trade became dull and featureless.

Crop conditions in France and Germany are reported to be rather poor, but India has every prospect of a bumper crop and will probably be exporting again by August or September for the first time in some years. Statistician Broomhall estimates the total production of European crops, without Russia, at a 10 per cent. reduction compared with last season's figures, and on account of the improved American and Canadian crops, which are now being seeded, and the fact that the demand from India, Russia and Japan will be smaller, the prospects for the 1922-1923 season point to lower wheat values and a slightly more favorable condition for the British importer. Russia has planted an acreage over 80 per cent. higher than last year.

The coarse grains have been generally quiet and followed the trend of wheat prices. Considerable shifting of hedges from the May to the July future has been going on in all grains. There is a firm demand for cash oats from England and the continent and a large export trade is developing.

QUOTATIONS ON BRAN AND SHORTS.

The following nominal quotations on bran and shorts have been reported by the Canadian National Millers' Association, Coristine Building, Montreal, to the United States Customs Authorities as the prices of these commodities now in effect. These prices are the net cash prices in bulk, f.o.b., the mill:

	Bran.	Shorts.
Montreal	$25.50	$27.50
Toronto	25.50	27.50
Port Colborne	21.00	23.00
Fort William	19.00	21.00
Keewatin	18.50	20.50
Winnipeg	18.00	20.00
Moose Jaw	14.00	16.00
Calgary	11.00	12.00

In spite of the huge Canadian wheat crop of last year, Ontario mills were complaining of a shortage of wheat the past month and talking of importing supplies from the United States.

OCEAN RATES TO BALTIC AND CONTINENTAL PORTS ARE REDUCED.

Reductions ranging from 10 to 25 per cent were made recently in North Atlantic ocean freight rates by steamship companies operating into Baltic and Continental European ports. Grain, flour and other important commodities will be affected by this latest action. As a result of the ending of the conference rates to Levant and Black Sea ports were declared open, and competition will be the word, for the time being at least.

The new rates to Continental European ports are as follows, quotations being per 100 pounds:

	Grain	Flour and Starch	Glucose
Amsterdam	14c	19c	20c
Bremen	15c	20c	29½c

Rotterdam and Antwerp have the same rate schedule as Amsterdam and Hamburg follows Bremen. Competition from non-conference lines is assigned as the reason for the cut in rates.

Baltic rates are ordinarily lowered in sympathy with those to the Continent, as otherwise it would become possible to trans-ship at Hamburg or Bremen for Baltic ports and effect a saving. In adjusting its rate schedule the Baltic conference established three groups of ports, the first including Bergen, Gothenberg, Christiania and Copenhagen; the second Stockholm, Malmo, Trondhjem, Swedish ports not north of Stockholm and Danish ports; and the third, the Reval, Riga, Helsingfors, Abo and Hango. Danzig has a special rate schedule.

The new Baltic rates are as follows.

	Grain	Flour and starch	Glucose and condensed milk
Group 1	21c	26c	35c
Group 2	22½c	27½c	37½c
Group 3	24c	29c	40c
Danzig	21c	26c	35c

FLOUR EXPORTS TO U. S. DECLINING.

Ottawa.—Figures compiled by the Canadian Department of Trade and Commerce from customs returns show that during the month of March last the United States bought and imported for home consumption 71,063 barrels of Canadian flour as against 198,968 in the same month of 1921. This makes a total for the first seven months of the current crop year 418,320 compared with 1,104,892 last year. These figures supply a basis on which the effect of the Young emergency bill in this particular commodity can be measured so far as trading with Canada is concerned.

NEW GRAIN COMMISSIONER HAS HAD WIDE EXPERIENCE.

Winnipeg.—Mr. G. Matthew Snow, of this city, whose appointment to the Board of Grain Commissioners in succession to Mr. William D. Staples was confirmed at Ottawa recently, has been a resident of Western Canada for the last 42 years. During this time Mr. Snow has been actively farming or looking after the farmers' interests in the marketing of grain. Coming to Winnipeg in 1880 from Edinburgh, Scotland, Mr. Snow decided to farm, and was on the land for two years at Austin, Manitoba, later moving to Wolseley, Saskatchewan, where he homesteaded for twenty years. In 1905 Mr. Snow returned to Winnipeg and was appointed deputy warehouse commissioner, and remained in this position until the Board of Grain Commissioners was constituted in 1912. He was immediately appointed to that body as Winnipeg agent. In September, 1920, he was appointed secretary of Northwest Grain Dealers' Association, succeeding Frank O. Fowler, and holds that position at the present time.

Mr. Snow and Hon. W. R. Motherwell, Minister of Agriculture, took steps to arrange the first convention of the Saskatchewan Grain Growers' Association in 1901. He was also active in organizing the Manitoba Grain Growers.

NO JUSTIFICATION FOR CONTROL SAYS WINNIPEG BOARD OF TRADE.

Winnipeg.—The Winnipeg Board of Trade at a recent meeting held to discuss the present situation as regards re-appointment of the Wheat Board for provinces making co-operative move to establish board to control wheat prices, favored the view of Fort William that it would be disastrous to the trade to hold back wheat during the shipping season of September, October and November. The council of the board declared re-establishment of the board is economically unsound, and in view of the important interests concerned there is no justification for the control of wheat in Canada, the report states.

THE WESTERN MARKETS

The following report furnished by Messrs. Baird and Botterell, 103 Grain Exchange, Winnipeg, shows daily highest price levels from April 28, 1922, to May 12, 1922, inclusive.

	April 28	April 29	May 1	May 2	May 3	May 4	May 5	May 6	May 8	May 9	May 10	May 11	May 12
May Wheat	1.40⅜	1.40⅜	1.40¾	1.42	1.42⅞	1.42⅝	1.42⅛	1.39⅛		1.39¼	1.39½	1.43	1.43¼
July Wheat	1.38⅜	1.38⅝	1.39⅛	1.39½	1.39¾	1.39	1.37⅞	1.36¼		1.36⅞	1.37½	1.39¾	1.40
May Flax	2.45½	2.49¼	2.50	2.50¼	2.52¼	2.50½	2.50	2.46½		2.47	2.47	2.48	2 48¼
July Flax	2.44⅝	2.49¼	2.50	2.49¾	2.51⅝	2.50¾	2.50	2.48		2.47⅛	2.47¼	2.49	2.49
May Rye	1.08½	1.08¼	1.07⅛	1.07¼	1.08	1.06⅝	1.07⅛	1.07		1.05¾	1.05½	1.05	1.05⅛
July Rye	1.05	1.06	1.06⅞	1.08	1.07½	1.07	1.07¼	1.05½		1.04¼	1.04½	1.05⅜	1.06¼
May Barley	0.68⅞	0.69	0.68¾	0.69⅛	0.69½	0.69	0.68⅜	0.67¾		0.67½	0.68¼	0.69⅞	0.69¼
July Barley	0.68¼	0.68¼	0.68	0.65⅝	0.69⅝	0.69	0.68⅝	0.68½		0.69⅛	0.69½	0.71	0.71⅛
May Oats	0.51	0.51⅓	0.51¾	0.52¾	0.53⅜	0.53⅛	0.52⅝	0.52⅜		0.52⅞	0.53¼	0.55⅛	0.56
July Oats	0.50⅞	0.51	0.51¼	0.51⅞	0.52¼	0.51⅞	0.51⅝	0.51¼		0.51½	0.51¾	0.50⅛	0.50¼

Arbor Day, Exchange Closed.

Foreign Flour and Grain News

At the present time the flour export trade appears to be at a standstill although it is generally admitted that the increasing number of inquiries from stock depleted countries is distinctly encouraging. Flour mills throughout the country generally appear to be running at about 50 per cent. capacity. Prices have not changed since last report, those prevailing in Montreal being unchanged with car lots of first patents quoted at $8.50, second patents at $8, and strong bakers at $7.80 per barrel in jute bags, less 10c per barrel for spot cash.

The condition of the market for winter wheat flour continues much the same as the above, the movement being light and prices steady.

A survey of the position as regards the world's wheat supplies reveals that exporting countries, after setting aside the requisite quantities for meeting their own consumption until their next harvests, had at disposal on 1st January, 1922, an exportable surplus of 11.8 million metric tons of wheat. It is impossible to form a definite estimate of the aggregate quantity that the importing countries will require previously to 31st July next, when, for the most part, they will gather their next wheat crop; economic and financial conditions will dictate, in more than one country, as to the possibility of affording complete satisfaction for the food requirements of the respective populations.

There has been little or no improvement in the foreign demand for Manitoba spring wheat locally, and business in this grain has been dull, but there has been a good enquiry for all grades of Canadian western oats, which, however, did not result in many sales being made, owing to the fact that prices bid were generally out of line with values in this market. Recent advices from New York state that sales of 500,000 to 600,000 bushels of wheat were made in that market for export account, including five loads of No. 2 hard wheat for last-half of May shipment from Montreal at 5c per bushel over the prevailing Chicago May option. Cables report that Germany had bought one million bushels of Plate wheat for May and June shipment at $1.55 per bushel which was 1s. per quarter below the purchases made early in the month.

SOUTH AFRICA—Recent rains have improved conditions in the summer rain belt, where the crops have been suffering from dryness.

CZECHO-SLOVAKIA—Many flour mills have been closed down on account of the competition of flour imported from Hungary and Roumania. It is reported that only water mills are working.

FRANCE—The French Minister of Agriculture is beginning to regard the crop situation with anxiety. A rise in the price of bread is regarded as practically unavoidable as a result of the present conditions. The price of bread has increased an average of 12 francs per cwt. since the lowest level was reached. The bad weather also has caused a rise in the prices of vegetables.

ITALY—The Government has extended to the end of June the decree allowing the free importation of wheat, according to advices received by the Department of Trade and Commerce.

ARGENTINA—Exporters are operating only on a limited scale and local millers buy from day to day only for their daily needs, as they have no orders for immediate shipment and can, therefore, wait until the market is more settled.

RUSSIA—"Winter crops in the West unsatisfactory; Central satisfactory; North mostly satisfactory. Volga sections stated campaign against locusts necessary."

WASHINGTON—Winter wheat production in the United States this year is forecast at 584,793,000 bushels by the Department of Agriculture, which recently announced the condition of the crop as 83.5 per cent. of a normal and the area remaining to be harvested on that date as 38,131,000 acres.

GERMANY.—Crop prospects are said to be somewhat under those of last year at this time; wheat suffered from the long severe winter; about the same area was seeded as last year.

AUSTRALIA—A near-drouth reported, plowing and wheat seeding delayed.

INDIA—Total production in Bombay 21,280,000 bushels, against 11,200,000 bushels a year ago; harvest is now completed in that district, but transportation difficulties have prevented shipment of the new crop.

NORTH AFRICA—In Algeria, the weather was too dry and hot for the crop, as, following the recent heavy rains, the ground is baking hard; weather more favorable in Tunis.

GREAT BRITAIN.—There has been no improvement in the demand for home-milled flour, the enquiry from bakers still being slow. Owing to the recent sharp advance in wheat, Liverpool millers have advanced all grades 1s. (0.22½) per sack, but it is doubtful if this advance has been established as yet. There has been rather more doing in foreign flour just before the Easter holidays. Kansas patents are quoted at 48s. ($10.80) and Manitoba patents 47s. 6d. ($10.68) to 50s. ($11.25) on spot, which is unchanged. Forward offers of American and Canadian are smaller to this country, and Manitobas are 1s. 6d. (0.34) to 2s. (0.45) per sack dearer. Australian is held for 6d. (0.11) advance for May clearance.

ALBANIANS NOT WHEAT USERS.

Scutari, Albania.—There is one country in Europe where wheat is not the staff of life. That country is Albania. White flour is frowned upon here. A recent cargo of wheat from North America had to be given to charity because there were no buyers. The principal article of diet is corn meal, prepared exactly as the North American Indians used to prepare it.

In his food as well as in his customs the Albanian feels that what was good enough for his ancestors is good enough for him. The staple food among the men of the hills is corn bread made from slender crops of maize grown on the steep slopes. This is eked out with milk and eggs and occasionally a fowl, while on fete days a sheep is killed.

The Elevator Operator

THE PRINCIPLES OF PNEUMATIC CONVEYING EXPLAINED.

The general principle of pneumatic conveying is to cause a current of air to flow along a pipe, this air carrying with it a stream of the material to be conveyed.

This may be done in two ways, either by suction or pressure; the former is used when it is desired to bring grain from a number of outlying points to one central position, the latter when it is desired to distribute the grain outward from one centre.

To describe the former case first:—A vacuum pump placed at one end of a line of pipe, sucks air in at the further end; this end is furnished with a suitable nozzle—which will be referred to later—and is immersed in a heap of grain, the current of air carrying away the material with it. At the position at which it is desired to deliver the grain, the pipe enters an apparatus called a discharger, the effect of which is to separate the grain from the air current. The grain drops out below the discharger to be dealt with as required, while the air leaves the discharger by another pipe.

Purifying the Air.

As most grain contains foreign bodies of various kinds—sand, straws, and dust—which would tend to have a harmful effect on the piston and cylinder of the pump, it is necessary to provide means of purifying the air. To this end, a device called a separator is fitted in the pipe line, which effects the removal

Unloading Ship by Means of a Pneumatic Conveyor.

of the heavier parts, such as straws and husks. The air, carrying the dust along with it, then passes through a filter, after which it enters the vacuum pump in a purified condition, and is exhausted outside the building. It should be noticed that the filter just mentioned may be of two types. When the retention of the dust is of no importance a wet filter is used, the air passing through water, and the dust being thrown down in the form of sludge. But when the preservation of the dust in the grain is desirable, as, for instance, when it is required to check the weights given on invoices for shipments of grain, then the air is filtered through tubes of specially woven fabric; the dust is then collected periodically and weighed.

Distributing Pipe and Flexible Suction Pipe.

The suction nozzle at the extreme end of the transport line is fitted with means for varying the amount of air admitted; and in this way the working of the plant may be adjusted to the best advantage.

By connecting the suction nozzle with one or more lengths of flexible hose a large area may be covered and trimming entirely dispensed with.

Should it be required to convey from a silo or hopper, instead of from a heap on a floor, the transport line is coupled directly to a casting attached to the bottom of the hopper and fitted with slides for controlling the amounts of air and grain admitted to the transport line.

One or more pipe lines may run to the discharger from different directions, thus enabling several buildings to be connected to one centre. Each pipe may be fitted with branches along its length so that grain may be taken from any desired spot.

Where a branch line joins a main line, a pipe switch is fitted. This device is one of a very neat and convenient construction, and may be likened exactly to a switch on a railway line; it is protected by letters patent. By the use of the pipe switch, as many as three separate side positions may be connected with one point of the main transport line, and it should be noted that when the switch is thrown over so as to connect any particular branch with the main line, all other branches are disconnected.

The Elevator Operator

From the foregoing it may be understood that the principle of a suction plant lends itself to cases in which it is required to convey grain from one or more outlying points to one central station at which there is power at hand.

For the converse, where material is distributed from a central point to surrounding positions, a blowing plant is used.

The general principle is just the same, except that the air is blown from the pump along the transport pipe; in this case, however, as there is no dust-laden air to pass through the pump, the filter and separator required in a suction plant are unnecessary.

The material is admitted into the transport line by a device called a feeder, which is, in effect, a rotary air lock; it is blown away by the current of air down the pipe and issues at the end of the latter, wherever this may be placed.

Should it be necessary to control the escape of the dust, as in a brewery, the transport line may end in a cyclone; in this case the grain falls out of a spout at the bottom of the vessel, while the dust-laden air is conducted away to the outside of the building or to a dust chamber, as may be desired. Pipe switches may also be used with a blowing plant in order to connect branch line with a main line as explained above.

PORT REGULATIONS ARE MODIFIED IN RESPECT OF GRAIN SHIPMENTS.

Undue restrictions upon shipments of grain in regard to which complaints have been heard lately, will be obviated by modified port regulations which were submitted to and approved by the council of the Board of Trade, Montreal, recently. The first of these amendments provides for the stowage of bulk grain in 'tween decks on condition that there shall be stowed over it five heights of bagged grain. In the second amendment there is allowance of a certain measure of discretion on the part of the port warden in regard to special vessels which may not fit in exactly with the regulations.

Report Adopted.

The report of the port warden board of examiners, consideration of which had been unavoidably delayed, was submitted to the meeting and was unanimously adopted, so that the regulations of that office will be amended forthwith. The report made the following proposals:

Instead of the following clause: "There shall not be carried between decks, or if the ship has more than two decks, between the main and upper decks, any heavy grain in bulk, except such as may be necessary for feeding the cargo in the hold, and is carried in properly-constructed feeders, the following clause is substituted:

"There shall not be carried between the decks any heavy grain in bulk, except such as may be necessary for feeding the cargo in the hold, and is carried in properly-constructed feeders; but in a ship having more than two decks heavy grain may be carried 'tween decks to such a height as will permit the stowage over it of five heights of bagged grain, and where bagged grain or other cargo is used for securing the bulk grain, boards of one inch thickness must be laid close, edge to edge, on athwartship bearers not more than four feet apart on the bulk grain to prevent it shifting."

The following rule was added; In the event of the unusual construction of vessels which may necessitate deviation from the foregoing rules, the port warden may use his discretion, subject to the approval of the examiners of the office of port warden.

THE NEW CAMPBELL GRAIN DOOR.

The new grain door invented by Mr. D. Campbell of the Winnipeg Grain Exchange, has attracted much attention.

The door is simplicity itself, consisting of two sections of lumber 28 inches wide and 62½ inches long, two sections 14 inches wide and 65 inches long, two reinforcing strove and two iron grooves. The grooves would be permanent and would last the lifetime of the car. The sections overlap thus eliminating leakage and are slipped into position and held by the grooves. No nails are therefore necessary. In unloading, the bottom section is raised by inserting an iron bar, which, as demonstrated, is but the work of one or two minutes.

The inventor has taken out patent rights both in Canada and the United States.

The saving claimed is very considerable.

The grain doors used by the railways at the present time are nailed into position, and in unloading it is necessary to break away a substantial portion of the lower section. The average cost of one door is placed at 75 cents plus the additional cost or repairing necessary after each trip and the life would not exceed three trips, whereas the Campbell door, it is claimed, should be good from 15 to 20 trips.

Sault Ste. Marie, Ont.—The grain movement through the canal here in the 13 days in April open to navigation equalled the movement for 23 days in April a year ago, according to figures made public by canal officials. Wheat shipments were 9,308,560 bushels, nearly a million bushels over last year.

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Elevator, Mill & Personal Notes

Kelvington, Sask.—The Canadian West Elevator Co., Ltd., will build a standard 30,000 bushel house here.

Bradwell, Sask.—Preliminary work has commenced on the erection of the new elevator here for the State Elevator Co., Limited. The new house will replace that which was destroyed by fire last fall. The new elevator will be up-to-date in every respect as regards both construction and equipment.

Montreal.—The Dominion Flour Mills Co., Ltd., installed a Wolf Experimental Mill in their mill laboratory recently.

Dundas, Ont.—The Colville Feed & Milling Co., Limited, has been incorporated with a capitalization of $150,000.

Charlottetown, P.E.I.—Operations have been resumed in the plant of the Charlottetown Milling Co., Limited. The plant was closed for a year.

Mitchell, Ont.—Messrs. Stuart Bros. mill here has been taken over by Mr. W. A. Stuart & Son. The Stuart Bros. mill at New Hamburg, Ont., was absorbed some little time ago by the Wolverton Milling Co., Limited, of Wolverton, Ont.

St. Catharines, Ont.—A concrete cleaning house and an elevator with a capacity of 150,000 bushels are being erected by the Canadian Shredded Wheat Co., Limited. The concrete storage will replace the steel tanks formerly used. It will interest millers and elevator operators to learn that the machinery which is being installed includes a Carter Disc Separator for which Messrs. Strong Scott, Ltd., of Winnipeg, are the Canadian selling agents, an Invincible Receiving Separator from the Invincible Grain Cleaner Company, Silver Creek, N.Y., and Link Belt Silent Chain Drives which are the product of the Link Belt Company of Chicago, which has branches at 10 St. Michael's Lane, Montreal, and at Wellington and Peter Streets, Toronto.

Toronto.—Extensive renovations in the office in the Royal Bank Building, Toronto, of James Richardson & Sons, grain dealers, Winnipeg, are in progress. More space is being added, which has been necessitated by the removal of some of the staff from Kingston. Mr. James Richardson, head of the company, was in Toronto recently.

Melfort, Sask.—The Searle Grain Co., Ltd., is transferring its head office from here to the Winnipeg Grain Exchange.

Mr. A. C. Randall, of the grain firm of Messrs. Randall, Gee & Mitchell, Winnipeg, returned recently from a trip to Japan and China extending over three months. Mr. Randall states that the trade of Japan, on account of continuing high prices to keep wages up after the war, has fallen off considerably, with the result that unemployment is being felt keenly. China, on the other hand, accepted her losses and appears to have kept her industries going, and to be exporting more than formerly.

Mr. T. S. Matheson, of the Matheson, Lindsay Grain Co., Winnipeg, left recently on a pleasure trip to Europe.

Mr. R. Dobell, western manager for the Ogilvie Flour Mills Co., Limited, at Winnipeg, accompanied by Mrs. Dobell, sailed recently for England where they will spend some little time.

Dr. Charles E. Saunders, B.A., Ph.D., LL.D., Dominion Cerealist, whose name is illustrious with that of his father, Dr. William Saunders, C.M.G., for the discovery of Marquis wheat, will terminate his service with the Dominion Government next month. He intends going to France "to study French for recreation." Dr. Saunders has been at his post at Dominion Experimental Farm, Ottawa, for 20 years. He is now 55, and has recently been in such poor health that he could work for a few hours a day only, and that against his doctor's orders.

Mr. James Stewart, President of the Maple Leaf Milling Company, Ltd., has returned to Winnipeg after spending some time at the head office of the company in Toronto.

Mr. W. C. Omand's many friends in the flour and grain trade are pleased to see him back at his office in the Royal Bank Building, Toronto, after a somewhat protracted illness.

Mr. William Hay, a well-known miller from Ailsa Craig, Ont., was a recent visitor in Toronto.

Mr. James Cullen, of Messrs. James Cullen & Son, Ltd., flour millers, Woodstock, Ont., was a caller at the office of the Canadian Flour Export Company in Toronto recently.

Mr. W. J. Baldwin, Aurora's well-known flour miller, was a recent caller on the flour trade in Toronto.

Mr. S. R. Stewart, late of Messrs. Stewart Bros., New Hamburg, Ont., and a director of the Canadian Flour Export Company, Ltd., was a recent visitor in Toronto.

Mr. H. L. Rice, of the St. Mary's Milling Company, St. Marys, Ont., visited the Toronto Board of Trade recently.

Mr. R. A. Thompson, president of the Dominion Millers' Association, is confined to his home at Linden, Ont., suffering from a somewhat severe illness.

Mr. W. B. Browne, one of Canada's oldest millers and flour dealers, and head of Messrs. W. B. Browne & Co., has been laid up for some time at his home in Toronto.

Mr. J. E. Botterell, of the firm of Messrs. Baird and Botterell, Grain Exchange, is at present visiting United States cities purchasing oil-boring machinery with which to commence active operations on claims which he and other Winnipeg financial men have secured in the Stoney Mountain district, about 20 miles north of Winnipeg.

Mr. Fred Bawlf, of the N. Bawlf Grain Co., is spending a few weeks holidays visiting friends in the United States. Mrs. Bawlf accompanied her husband.

Mr. G. H. Kelly, of the Messrs. Kipp-Kelly, Ltd., Winnipeg, returned home from a business trip to Calgary, Edmonton and other western cities recently.

Mr. F. B. McKenzie, a member of the staff of Messrs. Kipp-Kelly, Ltd., Winnipeg, who was seriously ill for some time, has recovered sufficiently to return to his office duties.

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THE PRACTICAL MILLER

GENERAL EFFECT OF HUMIDITY AND WHEAT MOISTURE ON MILLING YIELD.

Practical millers are well aware of the influence which the humidity of the mill's atmosphere has on results. Certain atmospheric conditions are recognized by practical millers as more conducive to good milling than certain others. And in a general way millers recognize that a control of the condition of the atmosphere within the mill would be an advantage to both yield and quality.

Recent experiments carried out in connection with the foregoing showed that with each increase of relative humidity or, in other words, with each increase in the extent to which the air within the mill became saturated with moisture, there was an appreciable decrease in the invisible loss occurring during milling and a proportionate increase in the total yield of mill products.

The higher total yields of mill products were associated with the higher relative humidities and with the wheats of lower moisture content. These higher yields in the former case were undoubtedly due to decreased evaporation during milling of the moisture contained in the wheat and probably to the absorption of some moisture from the atmosphere by some of the mill stocks; and, in the latter case of lower moisture content wheats, to the greater amounts of water which it was necessary to add in tempering these wheats in order to bring their moisture contents to the required percentage. Each 10 per cent. increase in relative humidity about 35 per cent. increased the total weight of the products obtained about one-half of 1 per cent., and each decrease of 1 per cent. in the moisture content of the wheat before tempering caused about six-tenths of 1 per cent. increase in yield. Compared with the weight of the wheat before tempering, the samples containing from 9 to 9.9 per cent. moisture showed a net gain in weight of total mill products for all relative humidities given, while the samples containing from 12 to 12.9 per cent. moisture before tempering showed a net loss in weight of total mill products except for relative humidities higher than 60 to 69 per cent.

No very pronounced relation between the moisture content of the flour and that of the wheat before tempering was shown, or in other words, no relation was shown of moisture content of flour to the quantity of temper water added to the wheat. On the other hand, a decided tendency was shown for the moisture content of the flour to increase as the relative humidity increased, a difference of 10 per cent. in relative humidity, making an average difference of approximately one-half of 1 per cent. in the moisture content of the flour.

No definite relation between air temperature and total yield of mill products was established.

IN THE ANNAPOLIS VALLEY, N.S.

CHECKING UP THE MILLER.

If every mill owner would have a correct mill, that would mill on less than 4½ bushels and would check up every bushel against the flour turned out and check up on the quality of that flour it would mighty soon eliminate the incompetent man.

If each miller had to give a report at the end of each day just the exact amount of all products taken off, the miller would have to know about all there was to know in order to get by, for bluff would not count against actual figures.

THE PRACTICAL MILLER

MAINTAIN QUALITY OF PRODUCT BY KEEPING MILL PLANT IN GOOD ORDER.

A great deal of the carelessness on the part of the practical miller is due to the management trying to cut expenses by not allowing the purchase of repair parts. The management should give the miller assistance by allowing him these renewals, but when the miller causes a purchase to be made, he should show to the management that he has made an improvement in results, or that the renewal is necessary. The management is entitled to this when they spend their money.

So often a change is made in the mill, either in milling equipment or in flowsheet, and no better results are obtained. In a case of this kind the management is simply out of the amount of money spent and they will not even make the interest thereon. Therefore, if the practical miller uses such poor judgment as to cause a purchase of this kind to be made and does not show results, he then throws a big stumbling block in his own way for future improvements.

Importance of Regular Checking Up.

It is often found very profitable to have an expert check up the plant with the miller. The instructions given by this expert will result in dividends. This ought to be done at least once a year. It is just as important to have your mill checked up as it is to have your books gone over by an expert.

The milling business is one of the most fascinating and one of the most pleasant there is and, also, is as profitable a one as a great many other lines, if run in a business way. The millers in the past year have been up against a proposition that was hard to overcome. The buyers were making purchases in small lots, looking for lower prices, and on every purchase of raw material the miller made, he found that raw material would decline before it could be turned into manufactured product at a profit. This, of course, was caused by a readjustment in prices after the war. It certainly looks like this readjustment in price as far as the mill is concerned, has reached its lowest point and hereafter the mill man should be able to again get his plant on a profitable basis.

AN ESSENTIAL IN PRICE FIGURING.

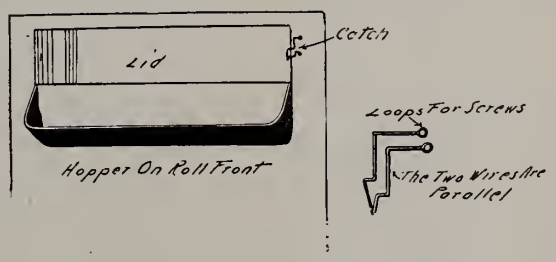
There are probably many small mill owners who do not deem it of any importance to know absolutely the number of pounds of wheat it requires to produce a barrel of flour. How can it be possible for any miller to run a mill with certainty of profit and not know the quantity of wheat it requires to produce a barrel of flour? And how can quotations on mill products be sent out if it is not known?

It is not possible to calculate the cost of producing a barrel of flour unless the exact amount of wheat is known. Many millers think it absolutely necessary to weigh the wheat going to the mill in order to figure the yield; but that is not at all necessary—only when the invisible loss has to be ascertained.

A trial may be taken any hour of the day by taking off all products for an hour or as many hours as desired and adding the products together, the total being the amount of wheat being used per bag of flour produced, less 2 per cent invisible loss. When a mill is packing all products from the stream, it is an easy matter to take a trial each evening, and this is the usual procedure followed. A daily check of the grind should be made in every mill.

HANDY CATCH FOR ROLL LID.

There often occur times when it does not happen to be convenient to hold the lid open while checking a roll or working on the scrapers. A good catch is made by doubling a piece of spring wire and bend-



ing it as shown in the drawing. As this catch only extends out about 1¼ inches, it is not in the way and will be found very efficient. It is also a good catch for any door in the mill.

REGULATING BOLTING ON FLAT SIEVES.

A fault often found with the flat type of sieve where seeds are used for cleaning is that the centre scalp cloth is cleaned with the same stream of wheat as is used for cleaning the flour cloths; therefore, if more wheat is put on in order to clean the flour cloths, then the scalp cloth will bolt too freely.

The remedy for this is either coarser flour cloths or more surface for scalp cloths, making the scalp cloths of a finer number. After about the fourth reduction on middlings, there are very seldom any purifiers used; therefore, the only chance of purification is in the scalping cloths; so, if more scalping surface is used and at the same time using finer cloths, the work will be more perfect.

LONG AND SHORT TEMPERING.

Whether or not the beneficial effects of a long temper are due wholly to a physical change in the wheat, or whether a chemical change is wholly or partly responsible is a problem that will probably give occupation to both chemists and millers for some time to come. Naturally, millers are more physicists than chemists. They know, in a general way, that certain chemical changes do take place in

THE PRACTICAL MILLER

wheat under the influence of heat, moisture and time, but they do not, as a rule, know what these changes are, or how soon they begin.

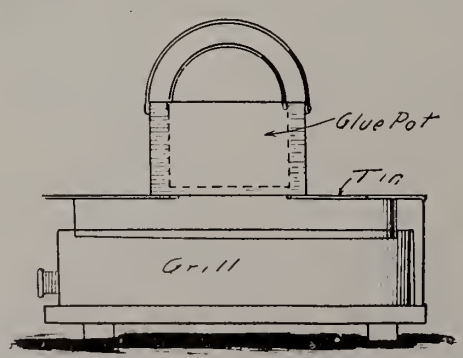
Millers have been told that the gliadin content of wheat, and consequently of flour, is materially increased by tempering. They are assured that the flours that will produce a better quality of gluten, and bake a better loaf of bread, are the flours from the head of the middlings system; and these flours always have a higher gliadin ratio than those from the latter reductions, where the gluten quality is poor, and the loaf inferior.

Some of the highest authorities on cereal chemistry deny, however, that the glutenin-gliadin ratio, or the actual gliadin content of a flour has any bearing on its gluten quality. Some millers don't know, and consequently, some of them believe it does, and some that it doesn't. But those who have weighed the evidence and decided that it does, have just as eminent authority on their side as there is on the other. Anyway, if the gliadin content of a flour does not determine whether the gluten of that flour is good quality or poor quality, the chemists should say what does. It looks as though the gliadin-glutenin ratio theory might be a theory that has been condemned by some chemists because of hasty conclusions. The proposition is undoubtedly very complex, and the rule is susceptible to so many outside influences as to make the exceptions difficult of explanation. Like all other exceptions, however, they could probably be explained in a reasonable way if enough were known about them.

The advocates of a rather short, or moderately long, temper insist that the action is altogether physical, since in the eight hours, or so, used, chemical action has not had time to take place. This may, or may not, be true. What takes place inside the wheat berry must be mostly imagined, since it is very possible for some change to occur that cannot be determined by ordinary chemical analysis.

HEATING GLUE FOR BELT SPLICING.

Lots of millers use a gasoline blow torch for heating the glue when splicing a belt. If you have electricity in your mill you can adopt a safer and easier method. Get a small electric grill, cut a piece



of tin or iron a little larger than the top of the grill and cut a round hole in the centre a little smaller than your glue pot. Turn on the juice and by the time you have the belt ready the glue is hot.

ABSENCE OF VITAMINES DOES NOT AFFECT WHITE BREAD FLOUR QUALITY.

A term used a great deal by the public, millers, cereal chemists, but particularly by food faddists and cranks, is "Vitamines." While its meaning is very little understood by millers, generally, it is very doubtful whether the food faddists know any more about it than anyone else, although they (the food faddists) use the term in their everyday discourse.

"Vitamines" is a pretty good word and the food faddists know it. That is why they use it so freely in their preaching to the public to eat bran. When the public has a statement thrown in their face regarding Vitamines they swallow it nine times out of ten because they are helpless to do otherwise. The public does not know what Vitamines are, but if such learned gentlemen as Dr. Wiley and others say that they are necessary in the human diet, why then we must have them served three times daily.

When mankind has been existing for all these years and getting along, somehow without this very necessary element and then suddenly learns that more Vitamines must be eaten, it would be foolish not to partake freely of this delicious morsel.

Millers are placed in a rather trying position. A handful of cranks and faddists, on one hand, clamoring for whole wheat flour, and the general flour buying public, on the other hand, demanding white flour.

It is impossible to gratify both of these demands with the same flour. The easy thing, then, would be to let the millers sit quietly back and let the faddists tear their hair while they go on supplying a pure, wholesome, white flour which the public will buy. But the proper and hard thing to do (and probably the expensive thing, too) is to combat these cranks with their own ammunition—propaganda.

Know Little About Milling Methods.

These exponents of bran make the guileless public believe, by their incessant insinuations, that the millers by some profoundly secret method are extracting all the Vitamines and Calories from the wheat and disposing of them in some more profitable method than leaving them in the flour. Every miller knows how much easier and also how much more profitable it would be to leave the Vitamine carrying properties in the flour rather than sending them, by much care, and by the outlay of much machinery and expense, to the feed bin.

It seems that just now, when there is considerable agitation along this line, is a very opportune time for millers either individually or through some collective agency, to present to the public, the facts regarding this Vitamine business from the millers' and the public's standpoint. There is room for much enlightenment on the subject amongst the bread eating public, and they will be prepared to accept it if it is presented in an interesting way.

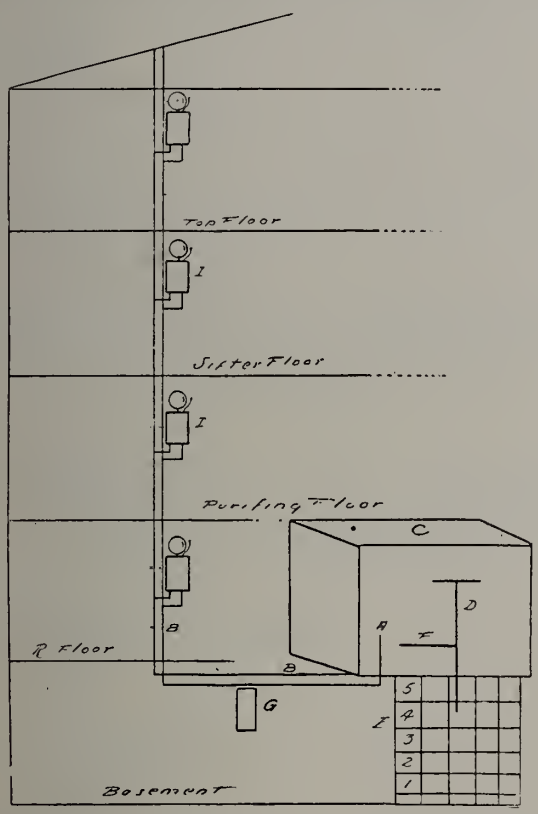
Success depends upon backbone, not wishbone.

THE PRACTICAL MILLER

ECONOMIZING ON POWER COSTS.

In certain sections of the country where mills operate on central station electric power without a flat rate they are apt to find that their consumption of electricity exceeds the limitations of their contracts and thus forms a peak load. Sometimes, it is only for ten minutes that the extra amount of power is used but very many of these periods within a month or within the busy season soon runs up a considerable bill.

In a certain milling plant peak load charges were constantly occurring. In one instance the putting on of the chopper ran up a bill of over $30 while in another instance ice came down the raceway and filled the racks which shut the water off from the wheels. The motor of course took care of the load but before it was noticed that the water was not



going to the wheels there had formed another peak load which cost the mill owner upwards of forty dollars.

This extra power cost set the miller thinking and he resolved to find a means to avoid the unnecessary drain. After considerable experimenting he perfected a device which has now been in use for two years and which he claims has saved him much money. The idea is declared to be especially valuable when the chopper is on the mill floor.

The accompanying sketch may be described as follows:

C is a motor box.

D is a pen for marking load pulled on paper chart.

A is a watch spring.

F is a wire fastened on pen arm, just long enough to make connection with watch spring A. Watch spring A is set at whatever power contract calls for, say 125 h.p. It is necessary to have a very delicate spring, as the movement of the pen must not be interfered with. A watch spring is just the thing, as it is very sensitive.

E is a paper chart.

G are the batteries.

I bells on all floors.

B wire that leads to bells.

When the wire F moves over the watch spring A, it makes a contact, which sets all bells ringing, and it is possible to look after it before a peak load is formed.

One of the chief features of the device is that it enables the miller to ascertain when too heavy a power load is being pulled without having to go near the motor room.

SMALL MILLERS AND FINE BOLTED FLOUR.

Fine flouring cloths are not exactly what practical millers may think them to be as guarding against or keeping down ash content in flour. The truth is that offals can be, and are, reduced as fine as flour, the finest of flour, and bolt with the flour to millers' sorrow. The big miller who has a large baker's trade, can get by very well with coarse flouring cloths, say a lot of 10 xx. The baker has machinery for broader dough mixing. The small miller sells to the domestic baker and the domestic baker must knead by hand. Fine bolted flour requires less kneading and for this very simple reason is preferred by the domestic baker.

The miller who can produce a flour which will yield good bread by simply having the flour stirred with a spoon, no kneading required at all, will make a fortune. It is the kneading by hand to which the domestic baker objects, and the flour which gives best result with least labor is the flour preferred by the domestic baker.

USE OF THE FLAKE BUSTER.

The smooth roll is a good purifier from the fact that it rolls the fine offals so they may be scalped off to feed. But it can be made a very good ash producer if it is set up as clean that it will flake and squeeze flour into the offals making the flour and offals one. This is a waste in yield. Then millers must break this flake and to do it they put in flake busters at tail of mill on stock which is very rich in offals, and which shoots a lot of ash into the flour.

Now how avoid this? Avoid flaking. To avoid flaking use the corrugated roll on all good clean purified middlings. This gives a chance to peel the flour out of the offals same as the break rolls peel the middlings out of the bran. By this system the tail of the mill is reached with stock which is practically free from offals. The flake buster should be used well up in the system on clean stock, or not at all.

THE PRACTICAL MILLER

CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

FOR SALE—50-barrel Midget Marvel Mill with elevators, beltings, etc., and complete installation for flour mill plant. Also grain grinder, ton per hour capacity. Good reasons given for wanting to dispose. Will sell cheap. Terms given for satisfactory paper. Reply Box 145, Carleton Place, Ont.

FLOUR SALESMAN WANTED.—Well-known milling company wants representative for Maritime Provinces. State trade covered and particulars as to salary, etc. Reply Box 112, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED — By Head Miller, with 20 years practical experience in modern Canadian mills up to 4,000 barrels capacity. Can guarantee best results as to quality and yield on both hard and soft wheat, and maintain mill at highest point of efficiency. At present in charge of a 1,000 barrel plant. Reply Box 85, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

PRACTICAL MILLER with 23 years experience seeks position with plant having daily capacity of 250 barrels or upwards. Can furnish excellent references. Reply Box 82, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—A 50-barrel Midget Marvel Mill, also complete installation of a flour milling plant. In use about three months. Machinery must be moved from actual premises. Good price for cash. Reply Box 103, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Head miller, with twenty years experience in 150 and 275 barrel mills, and still employed, is desirous of making a change. Applicant is 36 years of age, married, and can furnish excellent references. Reply Box 84, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

SALESMAN WANTED for the Province of Quebec. State requirements, experience and salary wanted. Reply Box 102, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

CYLINDER COCKLE MACHINE wanted. Must be in good condition and reasonable. Reply Mr. Charles Wyild, Ripley, Ont.

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WATER POWER FOR SALE.—One thousand horsepower on three leading Canadian railways and Great Lakes waterway. Less than 5 per h.p. per year. Elevator close. Town of five thousand population. Situated in Old Ontario. Reply Box 111, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

POSITION WANTED as head miller in a small or medium sized mill. Applicant has had twenty years' experience. Thirty-seven years of age. Reply Box 110, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FLOUR SALESMAN, speaking English, French and Spanish, seeks connection with milling concern. Reply Box 106, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—Sixty Barrel Stratford flour mill, Allis Rolls, Whitlaw Flour Sifter, Packer, Cockle Machine, etc., all in good running order. Full particulars and price on application to The Pearce Co'y, Ltd., Marmora, Ont.

WANTED TO EXCHANGE—A 20-inch McLachlan Chopper for a 15-inch Moore or Vessot, after April, or will buy. Reply F. H. Robinson, merchant miller, Cookstown, Ont.

FOR SALE—Two Centrifugal Reels, No. 1, one Centrifugal Reel, No. 3, one Hexagon Reel, No. 1. All in good order. Built by the Stratford Mill Building Co., Ltd. Reply Messrs. W. A. Stuart & Son, Box 88, Mitchell, Ont.

SALESMAN, with first-class knowledge of flour and feed trade in the Maritime Provinces is available for engagement. Results guaranteed. Excellent references. Reply Box 113, "Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—Flour mill properties, some operated by water power, others by gas engine and electric power. Write me before buying. Prices, $3,200 to $15,000. List your mills with me for sale. No listing charges and quick results if propositions will bear inspection. Apply E. Armbrust, Niagara Falls, South, Ont.

POSITION WANTED—Miller, thirty-seven years of age, is open to take charge of small or medium-sized mill, or to take position as second miller in large plant. Has had twenty years experience. Thoroughly familiar with all branches of milling. Can furnish excellent references. Reply Box 107, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

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THE PRACTICAL MILLER

FRENCH MILLS SENDING FLOUR TO MEDITERRANEAN COUNTRIES.

Although the 1921 wheat crop in France was large and of fine quality, the total production being estimated at 322,767,000 bus., compared to 236,929,000 bus. in 1920, government officials and others in touch with the situation are of the opinion that at least 15,000,000 or 20,000,000 bus. will have to be imported for domestic consumption before the next harvest.

The large stocks of grain formerly held by the government are largely disposed of and it is stated that the milling of the new crop began a month earlier than usual. The French mills, especially at Marseilles, are now doing considerable business in exporting flour to the Mediterranean countries. Wheat that is milled for export is admitted into France free of duty.

HOW THE JAPANESE USE FLOUR.

While the mills of Japan produce about 25,000,000 49-lb. sacks of flour each year and import both wheat and flour, it must not be assumed that flour is put to the same uses there as here. Rice is much preferred to flour in any form in Japan; and it is usually on account of rice shortage or relatively high prices that the consumption of flour increases. Its use is largely that of a substitute. So, instead of being made into bread, flour is made into a sort of paste like macaroni or noodles, called "udon," which is boiled and eaten in the same way as rice, for which it is a food equivalent.

But bread and small rolls or buns are used in Japan in increasing quantities. They are made in bakeries, many of which are small and do all the work by hand, though there are larger bakeries using machinery. The Japanese prefer soft wheat flour, because it is cheaper in price and easier to work. The makers of "udon" use Japanese flour chiefly. The bakers use practically all of the imported flour, often blending it with the native product. The Japanese judge flour very largely by the color and are more particular in this respect than most flour importing countries.

ROLLED OAT MARKET IN SCANDINAVIA.

Large quantities of rolled oats are used in the Scandinavian countries. This product is generally imported in bags of cotton or jute containing 50 or 100 kg. (110 or 220 pounds). Canadian rolled oats are liked, but Canadian prices have been rather higher than American. One well-known United States firm recently was quoting at $7.25, but later raised the price to $7.80 per 100 kg., while another American firm was selling at $7.70 per 100 kg. c.i.f. Copenhagen. The Canadian price at the same time was about $8 per 100 kg. c.i.f. Copenhagen. In Sweden an important American firm was quoting $8 c.i.f. Stockholm. Canadian firms would be able to increase their sales in Sweden by rolling a softer product, as the Swedish mills are doing. American rolled oats are found to be too hard for the Swedish taste.

The Duster

The rush-hour crowd was gathered waiting for cars. A middle-aged, red-faced woman dug her elbows into convenient ribs, regardless of owners, says the American Legion Weekly. "Say," she bellowed at a stout gentleman, after a particularly vicious jab. "Does it make any difference which of these cars I take to get to Greenwood Cemetery?" "Not to me, ma'am," he replied, slipping through an opening in the crowd."

"And now, Johnny, can you tell me, what is raised in Ireland?" questioned the teacher.

"Aw go on," replied the bright boy; "I know what you want me to say, but Ma told me I shouldn't talk rough."

TO-DAY'S BEST STORY.

The Modest Floorwalker—Customer—"Er—where can I find ladies' garters?"

New Floorwalker—"Oh, sir, can't you guess?"

The Pullman conductor, on being asked about the difference of fifty cents in price between the upper and the lower berth, explained, according to a newspaper clipping: "The lower is higher than the upper. The higher price is for the lower. If you want it lower, you'll have to go higher. We sell the upper lower than the lower. Most people don't like the upper, although it is lower, on account of its being higher. When you occupy an upper you have to get up to go to bed and get down to get up." Just here the man fainted.

Rufus Redd Dogg

"Th' talk down t' th' store t'other evenin'," exclaimed Rufus Redd Dogg," turned ez et invar-i-ably does, t' wheat prices, an' Lem Bellows who sez he's so right smart at figgers thet he can tell in advance t' a dime he's what goin' t' give his ol' woman t' run th' house f'r th' ensuin' month expressed th' opinion thet wheat 'ud go higher 'n a spittin' cat's back this-a-year."

" 'N supposin' et does," sez I. "Did ye notis how Squaw Creek rose up this spring till et looked like a hones' t' goodnes' river. Most everyone, they sez, sez they, thet et wuz up t' stay. But I notis, an' I've bin livin' here-a-bouts ez long, an' mebbe a little long 'n most, thet th' ol' Creek goes right back wher et belongs inta th' banks. 'N another thing I've notised," sez I, "ez, thet ef y'r bait ez right 'n ye don't bust up y'r appy-ratus yez can pull out considerable fish when th' ol' Creek ez low jes' th' same an' mebbe better'n when she's rampagin', 'n th' same remark applies t' wheat," concluded Rufus.

THE MANUFACTURE OF

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requires years of experience. We have made the equipment for over 3000 Elevators, which are scattered all over the three Western Provinces.

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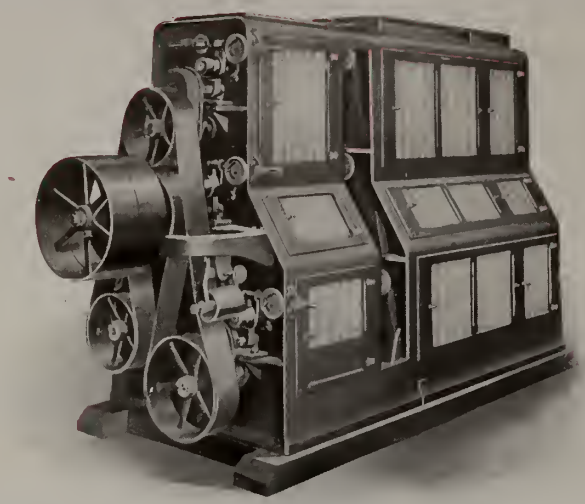

POSITIVE DIFFERENTIAL BETWEEN FAST AND SLOW ROLLS.

PATENTED VIBRATING SCALPER SCREEN under first break

SMALL AMOUNT OF POWER AND LABOR required to operate

With the use of gears we maintain a constant and positive differential. Experience has taught us that by use of gears ONLY can this positive differential be maintained.

The VIBRATING ADJUSTABLE SCALPER SCREEN under the first break is an essential feature. It is found exclusively in MIDGET MARVEL MILLS. Its use in Canada is absolutely controlled by us through letters patent.

POWERS REQUIRED:—We recommend 10 H.P. for the 25 Barrel, 15 H.P. for the 50 Barrel size, (Many owners are using less. We recommend, however, some reserve power.)

Built entirely within cast iron frames, with planed joints, the MIDGET MARVEL is solid, substantial, rigid, and operates entirely without vibration.

During the past ten years we have constantly improved the MARVEL. A recent improvement is a Disintegrator which is built in and forms a part of the mill. It is applied between the Second Reduction Rolls and Reel. This gives us a 5 per cent. average increase in yield. This feature, also, is exclusively controlled by us through letters patent. An entirely new ventilating system which eliminates excess moisture, heat and dust, is our latest improvement.

The SUCCESS of the MARVEL FLOUR MILL has been proven by ten years of operation and the 2,500 (round numbers) of these mills now running on the North American Continent.

For further information and descriptive literature address:

Pollard Manufacturing Co., Limited

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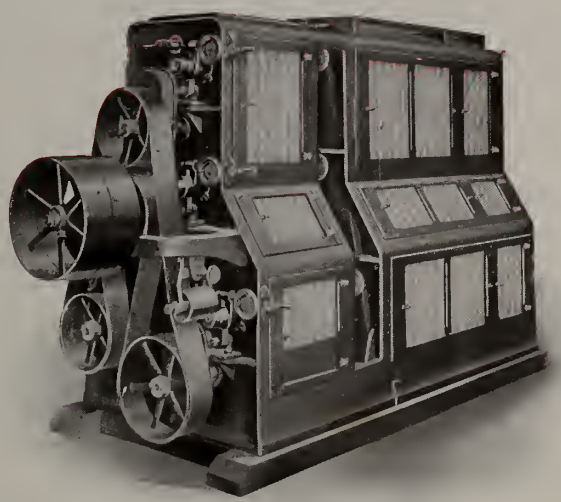
Western Office: 1206 Union Trust Building, Winnipeg, Man.

CANADIAN
Milling & Grain
JOURNAL

VOL. III MONTREAL, JUNE 1st, 1922 No. 9

THE YELLOW BOOK

The Midget Marvel Flour Mill



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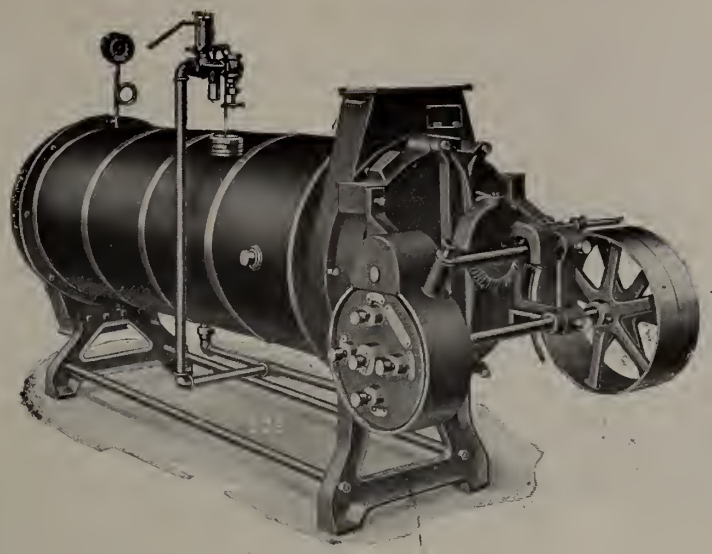
Daily Capacity, 22,250 Barrels



A New Monitor

The MONITOR Horizontal Wheat Conditioner has been in the family for quite some time, working privately in a couple of mills, to demonstrate in every-day use its right to be a permanent MONITOR.

IT HAS MADE GOOD. Yes, it's a horizontal type planned that way to give control of conditioning time.

The wheat is sent through in tubes, surrounded by steam. It does not matter how many tubes you use—each tube is a conditioner of itself and the results are the same on the quantity passing through, be it quarter, half or full capacity. Its speed through the tubes is controlled by four speed changes, each as easily controlled and handled by the operator as the gear-shifts on your automobile.

We want to tell you all about it but we lack space here. However, even though you do not contemplate the immediate installation of a conditioning and tempering plant or the overhauling of your present system, send for printed matter on this machine.

Keep informed of "progress in milling." This machine represents "real" progress. Know all about every part of your business.

The Monitor

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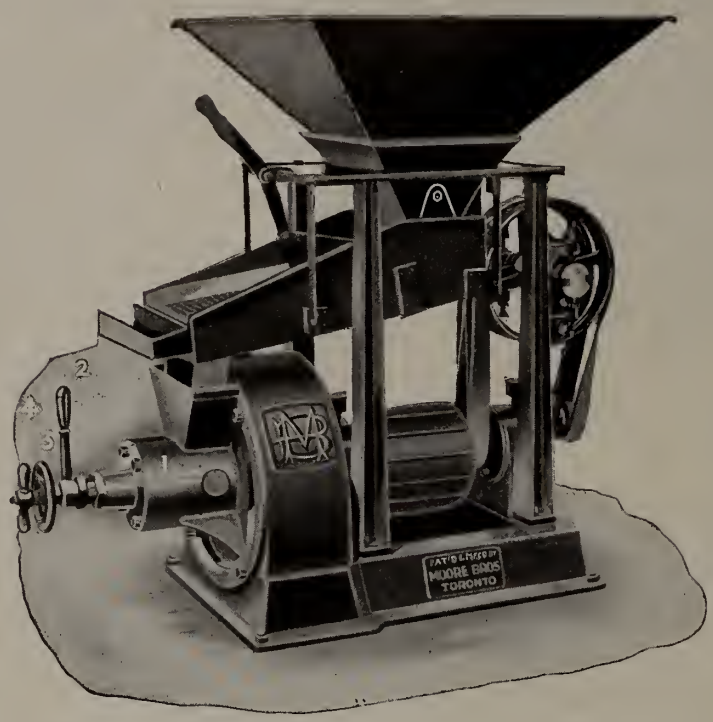

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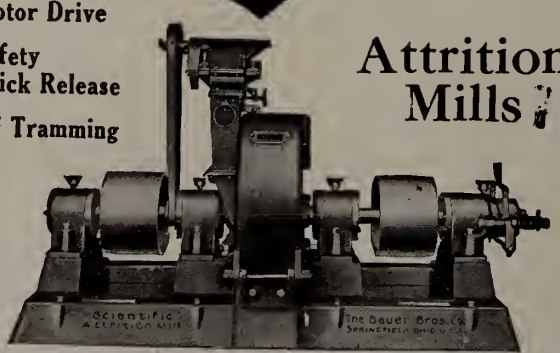

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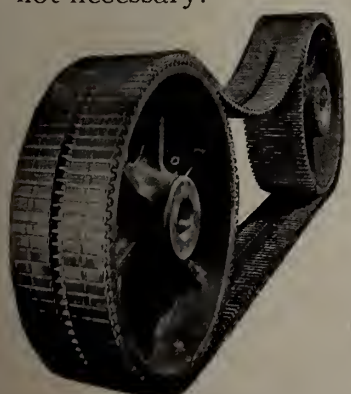

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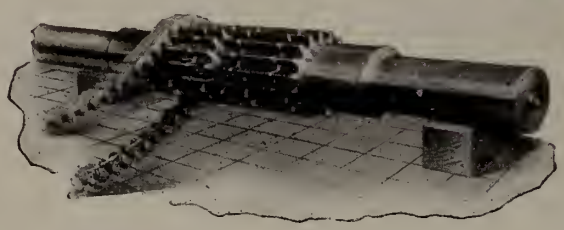

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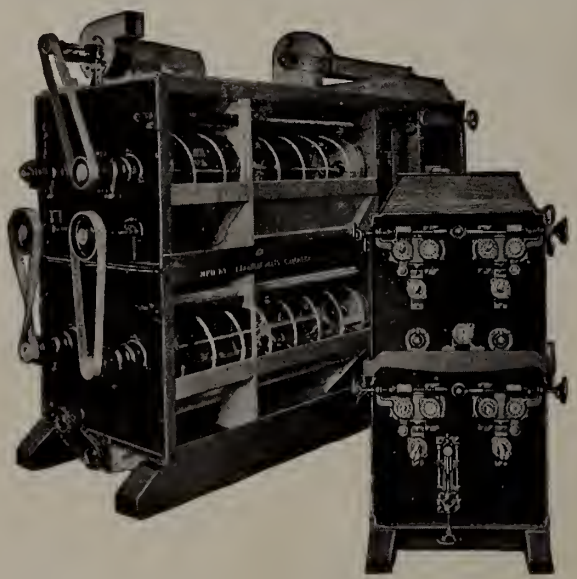

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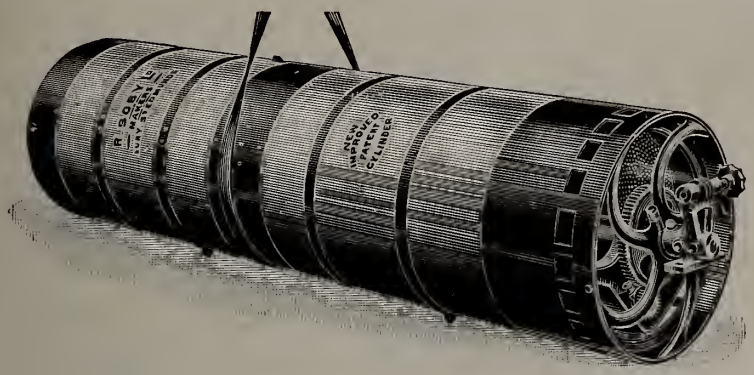

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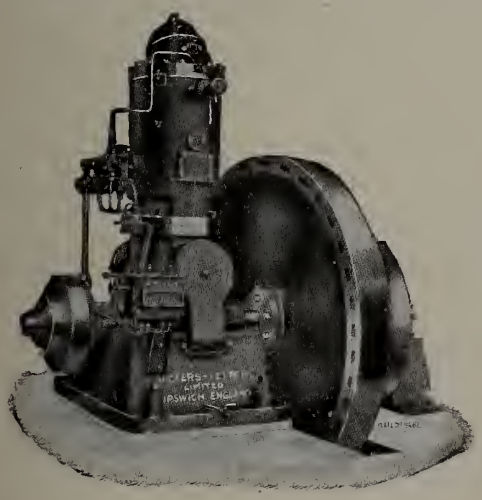

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VOL. III MONTREAL, JUNE 1ST, 1922. NO. 9

CANADA'S ONLY MILLING AND GRAIN PAPER

More Economy Needed at Ottawa

DESPITE the magnitude of her war debt which exceeds that of any other nation which was engaged in the great struggle, there is much food for reflexion in the thought that during the fiscal year of 1921, Great Britain reduced her war debt to other countries by approximately $300,000,000, her floating debt by approximately $650,000,000, and her total liabilities by $165,000,000.

These tremendous figures indicate that in spite of the grave industrial troubles that followed the war Britain is making a wonderful recovery and is adhering to the very excellent principle that a Britisher always pays his debts.

Glancing at Canada's finances it is apparent that this country is not succeeding as well in the matter of debt reduction since, during the year in which Great Britain cut off approximately $165,000,000 from her total liabilities Canada increased her net debt by nearly sixty millions of dollars.

Of course, nationally owned and operated railways and other expensive undertakings may be put forward as excuses but excuses are bad things with which to try and pay debts and it would seem that a period of the most rigid economy should be inaugurated by the Government without delay.

Opportunities for the Miller

WHILE the manufacture of the best flour possible for bread-making purposes is, or should be the goal towards which millers should perpetually strive, the thought often arises whether millers are overlooking an opportunity of studying ways and means by which a greater public demand might be created for their product.

Flour has many uses, but to the general public its bread-making qualities appear to be paramount. Other industries have taken their products and educated the public to diversified uses. Thus, the fruit industry has only quite recently created an enormous demand for raisins as a substitute for chewing gum. The humble prune has gotten before the public to such an extent as to remove it from the category of boarding house jokes.

Flour can be converted to many uses that would appeal to the public. Good cooks have scores of dishes of which flour is the principal ingredient. Noodles, dumplings and similar dishes are only a few of the appetizers that could be brought to the attention of the public that would be certain to meet with favor.

Every increased use that can be introduced to the public will reflect back to the miller. One per cent capita flour consumption compares low with other countries, but with a determined effort on the part of millers to acquaint the public with some of the many other uses of flour there is not the slightest doubt but that a noticeable increase in the volume of domestic flour consumption would soon become apparent.

Protection for the Grain Handler

ACCORDING to a statement recently made in the House of Commons at Ottawa by Hon. W. C. Kennedy, Minister of Railways, $193,330.48 was the value of grain lost from leaking cars between points of shipment and the head of the lakes during 1921. With a view to indicating that the authorities of the National Railways were doing what they could to protect grain shipping customers, the minister stated that during 1921 the amount charged to operating expenses for grain doors was $384,467, of which amount $55,843.26 was for repairs to grain doors. These figures show that approximately $50,000 more was spent in protecting grain from leakage in transit than the value of the amount of grain actually lost from this cause.

Canadian Milling & Grain Journal has on more than one occasion drawn attention to the leaking car nuisance and it suggests now as it suggested then that grain handlers should not only insist that none but first-class order cars are furnished them but that they should themselves take the necessary steps to ensure that their shipments are not reduced by losses which the expenditure of a nominal sum might prevent. The loss of even a few bushels is sufficient at present-day prices to wipe out considerable of the profit on a car-load shipment of wheat. Furthermore, the high level at which freight rates are being maintained should ensure for the grain interests during the current crop moving season the best service and the most generous consideration in the matter of the adjustment of claims that the railways have it in their power to give.

Dissention in the Ranks

OPPOSITION to the proposed re-establishment of compulsory control is not, it would appear, all on the side of the milling and grain handling industries. Indeed, from all accounts there would seem to be a growing opinion among western grain growers that

the restoration of control would do them and their interests more harm than good.

Writing in "Le Patriote," a south Saskatchewan newspaper published at Prince Albert, a leading grain grower of the district comes out flat-footed against control of any kind. "Wheat control," he argues, and rightly so, "is a step towards state socialism and the setting-up of a Wheat Board would have the certain effect of leading the grain growing community into doctrines contrary to the principle of order and liberty which are the characteristics of modern society."

Continuing the writer says: "Under our present wheat marketing system we feel that we can dispose of our property as we see fit. It is ours, and we can ship it to Fort William or Vancouver as we please. We sell it to whom we like when we like. From hundreds of firms of the grain exchanges we may choose one in preference. If we desire to sell outside of the grain exchange, we can do so. Our oats and barley notably, may be shipped to either Ontario or Quebec with profit and nothing prevents us from dealing directly with exporters if we wish. If the price does not suit us, we can wait. It is our absolute right. It is this absolute freedom which every man values as much as his own life in this modern country and which would be threatened if we departed from our present system.

"The Wheat Board would leave us no alternative than to give up our grain. Our grain will cease to be ours; it becomes the property of a commission which I am forced to accept as I have no choice. Monopoly has been created; my liberty as an intelligent and free individual has been suppressed; I have become a being with no will of my own, or, rather, I must bend my will before the machinery of a despotic state. This grain which I have produced by the sweat of my brow which is mine and upon which I rely to support my family, finds its way into the hands of men beyond my control, who may do as they please, who may sell as erroneously as I would myself and for which I cannot hold them responsible. If I am to judge by the last Wheat Board, I will not know until the end of the fiscal year the price which my grain was sold for. I will remain uncertain all that time. Am I rich? Am I poor? What have they done with my wheat? As a Canadian farmer and a British subject, I recognize no government has the right to take it away from me."

Canadian Milling and British Capital

COMMENTING on the excellent position which the Canadian flour milling industry occupies in the industrial life of the Dominion to-day, The Canadian Export Pioneer (London, England), suggests that the milling business in Canada is one which might well attract the consideration of British capital.

There can be no questioning the fact that considering the difficult period through which the industry but recently passed, we refer to the operation of control, the Canadian milling industry has staged a remarkable come-back. True, export figures for the past two years show a decline when compared with the volume of business transacted during certain of the war years before control came into force, but nevertheless it is safe to say that the Canadian flour export trade, despite handicaps which still exist, is in a better position than was the case immediately preceding the war.

Canadian flour is popular wherever it is known. Only recently samples of the Canadian product took the highest awards at an important exposition in Scotland. An examination of export statistics shows that Canadian flour is yearly finding its way to more and more new markets and this in direct competition with the products of other flour exporting countries.

The increased demand for Canadian flour in England has become a matter of serious moment to Old Country millers. Canadian millers, however, are confident that by maintaining the quality of their products no market which they now supply will ever be lost to them, but that on the contrary their export business will continue to show a steady expansion.

Proposed U. S. Tariff Changes

IT appears to be the general concensus of opinion that the proposed new United States tariff will not in the event of its adoption injure Canada's agricultural interests. In the United States, indeed, there is a growing opinion among those who have studied the proposals and their possible effect that the new tariff which has been framed for the benefit of the American farmer will prove of no benefit at all.

According to a recent issue of the Wall Street Journal the proposed new tariff simply penalizes the United States interests to the extent of the duty levied on Canadian grown grain. They have added the amount of the duty to the price which they pay for an article which they are compelled to purchase in any event, and the Journal goes on to point out that the American buyer would have to have the Canadian wheat regardless of price. This would seem to furnish a fairly strong argument in favor of the imposition by Canada of an adequate export duty on her higher grades of wheat so that the imports by the United States shall bring money to the Dominion treasury, which is sorely in need of it.

Continuing, the Wall Street Journal says:

"The wheat imported from Canada, the only imported wheat worth mentioning, does not compete with wheat grown by the American farmer, or even replace that wheat in the manufacture of flour. It supplements the American farmer's wheat and would continue to do so if the tariff were $2 a bushel. The Canadian wheat imported is different in size, in weight, and in color when ground, and is indispensable in the manufacture of any standard brand of flour.

"This imported grain is essentially a grade of hard wheat of which not a kernel is grown in the state of Minnesota. But the miller needs this grain to mix in definite percentage with his American wheat to suit the palate of the American consumer.

"Consequently the tariff on imported wheat is no more calculated to protect the farmers of North Dakota and Minnesota than a tax on door knobs. All wheat looks alike to the 'farmers' friend' in congress who meets any objection of this kind by telling his victims that Wall street necessarily knows nothing about farming. Wall street would go out of business if it tolerated for two minutes the farmers' ignorance of vital facts."

Millers should not forget that the smaller the percentage of actual production compared with capacity, the greater the cost of production per barrel. In slack times the cost may gradually double that of normal before one is aware of it.

EASTERN PROVINCES
MONTREAL
Dubrule Building
Phillips Square
Tel. Plateau 1983

MONTREAL JUNE 1ST, 1922

THE MONTREAL MARKETS

Flour.—There has been a slightly better enquiry from English importers for spring wheat grades of flour, and as the prices bid have been in line with millers' quotations a fair amount of business has been done for June shipment. The local trade continues rather quiet, and prices are somewhat irregular, but no actual change has been announced, car lots of first patents still being quoted at $8.50; second patents at $8, and strong bakers at $7.80 per barrel in jute bags, ex-track, less 10c per barrel for spot cash.

There has been no change in the condition of the market for winter wheat flour, prices being maintained with a steady demand for supplies and small offerings, and sales of car lots of choice grades are being made at $7.15 per barrel in second-hand jute bags, ex-track, with broken lots at $7.40 per barrel ex-store, and winter wheat patents at $7.90 to $8.15 per barrel, ex-store, in new cotton bags. The trade in white corn flour is comparatively slow at $5 to $5.10 per barrel in jute bags, delivered.

Grain.—There has been no improvement in the foreign demand for grain here. A few firm bids received for No. 1 and No. 2 northern wheat being fully 6d. per quarter lower than previously recorded. The trade in oats and barley is dull. On the other hand, recent advices from New York reported sales of 350,000 bushels of Manitoba wheat for export account.

The trade in cash grain in the local market has been quiet, but the feeling is steady, and prices are unchanged, with car lots of No. 2 Canadian western oats quoted at 66½c to 67c, No. 3 C.W. and extra No. 1 feed at 62½c to 63c, No. 1 feed at 61c to 61½c, and No. 2 feed at 58½c to 59c per bushel, ex-store, and American No. 2 yellow corn at 76c to 76½c and No. 2 mixed corn at 75c to 75½c per bushel, ex-store, in Canadian funds.

Millfeed and Rolled Oats.—The trade in millfeed is quiet, the undertone to the market having been, since last report, easy, with car lots of Manitoba bran quoted at $28.25; shorts at $30.25, and middlings at $32.25 per ton, including bags, ex-track, less 25c per ton for spot cash, with pure barley meal in small lots selling at $38 to $40; pure grain moullie at $38, and feed cornmeal at $35 per ton, including bags, delivered. The market for standard grades of rolled oats is quiet at $3 per bag of 90 lbs.

It is remarkable how little suction is necessary to keep a line of rolls perfectly cool and dry when the suction spouts are kept free and clean. Each end of the main suction trunk should have removable caps like a bucket lid so as to give it a good cleaning once in a while; that is the proper construction for them.

MONTREAL PRACTICALLY CONTROLS NORTH AMERICAN GRAIN TRADE.

There is no doubt that in respect of shipping Montreal holds a most enviable position. It is a matter of interest here that the United States is coming more and more to recognize this importance, especially as regards the grain trade, which is now practically controlled through this port.

In New York recently hearings were heard and witnesses were examined regarding the application of the preferential rate provisions of the United States Merchant Marine Act of 1920.

The consensus of opinion brought out at these hearings was that enforcement of Section 28 will tend to drive to Canadian ports, and especially to Montreal, for export, a considerable portion of American grown wheat.

In fact, some of the witnesses did not go behind the door to state their views and express their opinions as to the position Montreal now enjoys in this respect, and what might happen if the provisions of Section 28 were enforced.

Section 28 of the Merchant Marine bill, in substance, forbids railroads to quote preferential rates for export or import commodities except on American vessels when the board has determined that there are sufficient ships under the American flag to accommodate the traffic. This provision of the law is now under suspension by resolution of the Shipping Board.

The quantity of grain shipped through the port of Montreal so far this season has surpassed that of the previous year for the corresponding period, according to local grain men, who are looking forward to a very good year in the grain business.

While it is not anticipated that the grain business at the end of the season will exceed that of last year, the general belief is that it will not be far behind.

"If the financial conditions of Europe improves to such an extent that the people will be able to purchase what they want," said Mr. James Carruthers, president of James Carruthers & Company, Ltd., "we should have a very good year. But at the present time Europeans are not able to buy, and those who are buying demand the fall wheat, which is much cheaper than the old crop. Immediate delivery is not required, and the people are just waiting. Russia, too, is out of the market, and I do not see any alternative for Europe but to come to this country and the States. Russia's export of 700 million bushels per year must come from some place, and as that country is in a very unsettled condition it is not likely that very much of a crop will be grown."

Sees Big Trade

Mr. Thomas Harling, of the steamship firm of that name, expressed great confidence in the grain export business for the year.

"There will be a very big movement from Montreal this year," he said. "The season is early yet and we must not expect too much, but so far more wheat has been exported from Montreal this year in comparison to last year. However, I do not imagine that it will equal or surpass last year, which was phenomenal."

Denmark and Italy seem to be buying a good deal of grain. The first boat to arrive for a cargo for Denmark reached here recently, and several others will follow.

SAY NEW CHEQUE TAX WILL AFFECT LOCAL GRAIN BUSINESS

Montreal.—Grain interests do not hestitate to aver that the new tax on cheques will kill the small amount of business that they are now doing. "Business is exceedingly slack at present, but what it will be like, when the new tax on cheques comes into force I can hardly imagine," said one broker.

A manager of one of the largest grain exporting houses in Montreal said that he had figured out that the new tax would mean that it would cost them ⅛ of a cent more to ship a bushel of wheat from Winnipeg to England than it does at present, which amount is roughly the profit that they make on the transaction. As vast quantities of wheat that were handled by Canadian grain exporters last year are this year being handled by New York brokers, it is felt that the new tax is the last straw that will completely kill the grain exporting trade in Montreal, as with the advantage of cheaper ocean freight rates the American brokers would monopolize all the business.

It is pointed out that the grain brokers will be hit harder by the cheque tax than almost any other class as they deal in very large quantities and are content to make a small profit on their turnover. It is necessary for an exporter to give several cheques before he is able to buy and ship his grain from Canada. In the first place his Winnipeg house, that is if he is a large exporter, has to give a cheque for the purchasing of the wheat, the head office has then to give a cheque to the Winnipeg office, and then it has to secure a draft for which another cheque has to be given. In the case of a grain broker, who buys his grain through a firm like Logan and Bryan, the cheques that would have to be given to purchase and export a bushel of wheat would number to seven or eight. These cheques would not all be made out by the broker himself but in order that the transaction might be fulfilled different people engaged in the transaction would have to make this number of cheques out.

VANCOUVER'S GRAIN BUSINESS IS INTERESTING THE MONTREAL TRADE

The rapidly increasing volumes of wheat that are being transported from the West of Canada via Vancouver are creating a considerable amount of interest among Montreal grain brokers. Although the port of Montreal shipped a large amount of grain last year, the increase was not nearly as great as Vancouver's. During the season 1921 there were 49,939,034 bushels of wheat shipped from Montreal, which was an increase of 7,229,589 bushels from the amount shipped the previous season. The amount of corn shipped from this port last season had an abnormal increase, and one that is even greater than the tremendous increase in the volume of wheat that was shipped from Vancouver this year.

In 1920 only 431,055 bushels of corn were exported from the port of Montreal. Last year the quantity of corn exported rose to 44,529,018 bushels, which is an increase of 44,097,963 bushels. The difference in the rate of exchange made it cheaper for the Americans to ship their corn via Montreal than via one of their own ports. As the premium paid for United States money is very much smaller this year, it is probable that exports of corn this season from Montreal will not be as great as they were last.

URGES USE OF CANADIAN SHIPS FOR CANADIAN GRAIN SHIPMENTS

Some interesting comment is made upon the advisability of the shipment of Canadian grain for export in Canadian vessels the year round, by Gordon B. Johnson, Canadian Trade Commissioner in Ireland, in a recent report. He says:—

"Importers are unanimous regarding the desirability of shipping Canadian wheat from Canadian ports in Canadian or British vessels. While it is recognized that during the winter months shipment from United States ports is easier and cheaper, there are certain advantages that may accrue to the trade by shipment from Canadian ports all the year round to perhaps balance the account, apart altogether from patriotic reasons. Sailings from United States ports are very often irregular, and shipments are often delayed in transit, wheat arriving at its destination greatly overdue from vessels taking a circuitous course through many calls at other ports. Furthermore, Dominion Government inspection and the unceasing care of the Government in regard to wheat shipments until they have been shipped from the country are very highly prized by importers. The active interest of the Government in the case of shipments from United States ports must of course cease as soon as the wheat has crossed into United States territory."

Section of Harbor of West St. John which has just concluded singularly successful season.

ONTARIO

TORONTO

TORONTO JUNE 1ST, 1922

THE TORONTO MARKETS

Flour.—Flour dealers and millers report the export trade in flour as slow, and this they attribute to the lack of confidence in present values which prevails among European traders. Sales are light, and it is hard to get buyers in the United Kingdom or on the continent interested. Locally there is very little business passing in export flour. The weakening tendency in the wheat market has evidently scared off the United Kingdom buyers. Manitoba export grade of flour is quoted at forty-three shillings and six pence to forty-four shillings and six pence, but very little trade is offering at these figures. There is practically no Ontario winter wheat flour being exported as prices obtainable in the domestic market are away beyond an export basis. Ontario flour in the domestic market is in fair demand. Prices are now ranging from $6.40 to $6.70, Toronto and Montreal freights. Many bakers and other large buyers are believed to have stocked up well at the time of the big advance in wheat some weeks ago, and are now buying in small lots only.

Millfeeds.—The demand for millfeeds for the most part is small, owing to the coming of the grass season, although there has been a picking up of business for mixed cars. A slight improvement in the heavier feeds is noted. Although the premiums are off now, the small mills are getting their list prices and there is a noticeable diminution in price cutting. The following quotations prevail in Toronto: bran, $28.00; shorts, $30.00; middlings, $36.00; feed flour, $1.90.

Seeds.—At country points nominal dealers' bids for a few standard lines of seeds are as follows: alsike, per bushel, $6.00 to $9.00; red clover, $7.00 to $14.00; sweet clover, $3.00 to $3.25; alfalfa, $10.00 to $16.00; timothy, $2.00 to $3.50. Selling prices of the best quality Government graded recleaned seeds are nominally quoted as follows: alsike, per cwt., $20.00; red clover, $29.50; late mammoth red clover, $31.50; sweet clover, $9.00; timothy, $11.00; alfalfa, Ont., $31.00.

Corn.—American, track, Toronto: No. 2 yellow, 78½ cents; No. 3 yellow, 77½ cents.

Grain.—During the past week or ten days fluctuations have been frequent and fairly wide in the wheat markets in Toronto, advances being scored one day and wiped out the next. Towards the end of the week ending May 20, a greater tendency to sell the May option developed at Winnipeg and prices declined while the new crop months are relatively steady. Export demand has been scattered and spotty and domestic buying only fair. Congestion is said to have occurred at some of the lake ports, such as Goderich and Port Colborne, due to the lack of movement. At the latter port there has been a shortage of tonnage which could navigate the St. Lawrence canal. Offerings of Ontario wheat are light and firmly held. Domestic milling demand for wheat is only moderate, with corn and oats in fair request. During the week of May 13-20, prices of western wheat eased sharply, final prices being down 2½ cents to ⅝ cents on the options, with No. 1 Northern, c.i.f. the bay ports, off 3 cents to $1.51½. No. 1 Northern Manitoba wheat is quoted at $1.49¾; No. 2 Northern, $1.45¾; No. 3 Northern, $1.39½. Manitoba oats, No. 2 C.W., 60½ cents; No. 3 C.W., 57½ cents, extra No. 1 feed, 57¾ cents; No. 1 feed, 55¼ cents. In Ontario the rains of the past ten days have been just what was needed to bring on the spring grains in the province and to revive fall wheat and clover. Wire worms are reported to be working considerable damage to the fall wheat in different parts of Ontario. The most serious injury has been found in Perth and Huron counties, some fields being so badly infested that they have been plowed under. At the moment of writing commercial grade wheat is unofficially quoted at $1.50 to $1.55, delivered Toronto points, in car lots.

AMENDMENTS TO MILL FEED STANDARDS

The Department of Agriculture at Ottawa has issued a statement announcing certain amendments to the standards for bran shorts and middlings which became effective on April 10th last. These amendments are as follows:

SHORTS: Specifications regarding No. 20 mesh wire or its equivalent struck out.

MIDDLINGS: Specifications regarding No. 44 mesh wire or its equivalent struck out.

FEED FLOUR OR LOW GRADE FLOUR: Specifications regarding No. 8 standard bolting cloth or its equivalent struck out.

BRAN.—There have been no amendments or changes in the standards so far as the protein, fat or fibre content are concerned.

These standards are arrived at through a series of conferences with the Department of Agriculture and Live Stock Interests, and while, doubtless, some of these standards are possibly too high, nevertheless the Live Stock interests have been very urgent in their request that these standards be maintained if possible. If, by any chance, after a thorough trial they are found to be impractical, revisions have been promised.

CHANGE IN SEED TESTING POLICY

Toronto.—The Toronto branch of the Federal Seed Testing Laboratories has been advised of a change of policy in the administration of the laboratories. During the months of February, March and April the different laboratories are kept going at full capacity in connection with the administration of the Seed Control Act. Hereafter, from May 1, until the end of the following January, free service in seed testing will be given and a charge of fifty cents will be made for this service during the busy months. This is a restoration of the free testing that obtained some years ago. Testing will be limited to ten samples from any individual or firm.

During a campaign for prohibition, a little town took a lively interest in the election. Every house, with the exception of one displayed this card, "This house is dry!"

For days all eyes watched the windows of that house without any sign. At last this placard appeared: "This House Leaks a Little."

CANDIDATES FOR GRAIN INSPECTION APPOINTMENTS TAKE EXAMINATIONS

Fort William.—Between fifty and sixty candidates for grain inspectors or deputy grain inspectors, were examined here in their knowledge of grain in the trading room of the local Grain Exchange building. Messrs. Geo. Searles, of Winnipeg, chief government grain inspector, and W. L. Parrish and Donald Young. of Winnipeg, composed the board of examiners. The examination consisted of practical tests in judging grain. The applicants were brought face to face with some hundred samples and their skill in grading is thus put to a very severe test. Time is an important factor in the tests of efficiency.

DISCUSSING FUTURE OF EXCHANGE

Fort William.—Following considerable discussion relative to local conditions as they effect the Fort William-Port Arthur Grain Exchange, at a special meeting of the members held recently, a committee was appointed to meet with the council of the exchange in an effort to arrive at some solution whereby the divergent opinions held by different members respecting the future of the exchange may be settled upon grounds mutually satisfactory. Speakers at the meeting included Messrs. N. M. Paterson, J. P. Kenny, James Murphy and S. C. Young.

RECOMMEND NATIONAL WHEAT AGENCY

Ottawa.—The passage of an act creating a National Wheat Marketing Agency with powers similar to those of the Canada Wheat Board of 1919, and to become effective when two or more of the provinces have conferred upon this agency powers possessed by the late Wheat Board, has been recommended to Parliament by the House Committee on Agriculture. This action was taken as a result of the resolution recently introduced by Mr. R. M. Johnson, Progressive, of Moose Jaw, and was approved on a vote of 32 to 28. The Liberals voted almost solidly against the resolution, but the Progressives were supported by several of the Conservatives.

The Modern Sophocles

THERE is for everyone some work for which he is exceptionally fitted, and in the doing of which he will find solid satisfaction.

It is important that our life work should give us the means of supporting life, but in the beginning, do not think too much of the financial returns. Many a one is turned aside from his real career because an opening presents itself which gives him an immediate chance to make money. And so his best powers go undeveloped and his real place in the world is never filled. Some work requires more preparation than others, but do not be frightened out of taking your rightful place because it takes several years to get ready. One can learn to run an elevator in a few hours, but the position of the elevator man is not an especially well paying one and never will be, just because it is so easy to fit one's self to fill it.

Our happiness and our success depend largely on finding our work. Instead of taking the first thing that presents itself we must keep trying till we find the right place.

CHANGES IN GRAIN ACT ARE UNDER CONSIDERATION

Ottawa.—Changes stated to be necessary in the Canada Grain Act, particularly in reference to the disputed clause which provides for the licensing and bonding of grain dealers in the Western provinces were discussed at length, at a conference which took place here recently between members of the Board of Grain Commissioners, representatives of the Winnipeg Grain Exchange and the Minister of Trade and Commerce, Hon. J. A. Robb. The clause of the Act dealing with the bonding of grain dealing firms was recently declared ultra vires by a Manitoba court. Following the conference with the Minister of Trade and Commerce, members of the Grain Commission were in consultation with the Minister of Justice in respect to the laws under which the Grain Commission works.

THE CHICAGO MARKETS

The following table compiled from figures furnished by Messrs. Logan & Bryan, members of the Winnipeg Grain Exchange and the Chicago Board of Trade, C.P.R. Telegraph Chambers, Montreal, show highest price levels recorded on Chicago Board of Trade from May 13, 1922 to May 27, 1922, inclusive.

	May 13	May 15	May 16	May 17	May 18	May 19	May 20	May 22	May 23	May 24	May 25	May 26	May 27
May Wheat	1.46	1.43½	1.46½	1.47½	1.45⅞	1.43	1.40⅜	1.36⅝	1.38½	1.37¼	1.31	1.29	1.27½
July Wheat	1.27⅛	1.25¾	1.29	1.28¾	1.27½	1.26⅜	1.24⅞	1.24⅛	1.26⅜	1.25⅝	1.22½	1.23¼	1.23⅜
September Wheat	1.20⅜	1.19½	1.22⅛	1.21⅝	1.21	1.20⅜	1.19⅞	1.19⅝	1.20½	1.20¼	1.18½	1.19⅜	1.19½
May Corn	0.61⅜	0.61	0.62	0.61¾	0.61⅝	0.61½	0.61½	0.61½	0.61⅝	0.61⅜	0.61⅛	0.61	0.61
July Corn	0.64¾	0.64¾	0.65½	0.65⅛	0.64⅝	0.64½	0.64½	0.64⅜	0.64¼	0.64	0.63⅜	0.63½	0.63⅜
September Corn	0.67	0.67⅛	0.67⅞	0.67⅜	0.67¼	0.67	0.66⅞	0.66⅞	0.66½	0.66⅜	0.65⅜	0.66	0.66
May Corn	0.37¼	0.37⅞	0.38⅝	0.38½	0.38⅛	0.37¾	0.37½	0.37¼	0.37⅞	0.37½	0.37⅛	0.37½	0.37
July Corn	0.40	0.39⅞	0.40⅝	0.40⅜	0.40⅛	0.39¾	0.39½	0.39⅛	0.39⅛	0.39	0.38½	0.38¾	0.38½
September Corn	0.41¼	0.41⅛	0.42	0.41⅞	0.41½	0.41⅛	0.41	0.40¾	0.40⅞	0.40½	0.40	0.40⅜	0.40
May Barley	0.69⅞	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.68	0.68	0.68
July Barley	0.65	0.65	0.65	0.65	0.65	0.65⅛	0.65⅛	0.65⅛	0.65¼	0.65¼	0.65	0.65	0.65
May Rye	1.09⅜	1.09½	1.09⅛	1.11	1.11	1.09¼	1.08	1.06⅞	1.06	1.05⅞	1.04¼	1.02½	1.02¼
July Rye	1.08⅛	1.08¼	1.08⅜	1.09¾	1.09¾	1.08	1.07¼	1.06	1.05⅜	1.05¼	1.03½	1.02½	1.02½

WESTERN PROVINCES

WINNIPEG

WINNIPEG JUNE 1ST. 1922

THE WINNIPEG MARKETS

Flour.—There is no new feature to report regarding the flour trade in Western Canada. Business is undoubtedly quiet, both domestic and export, and not much improvement is looked for in the near future. The wheat market has been acting erratic, and this perhaps has had something to do with the quiet domestic trade, as the buying has been extremely light, and of the hand to mouth variety. Export trade is undoubtedly suffering from the high levels of prices which do not coincide with the ideas of overseas buyers, and their bids are considerably out of line. However, there is a little business being worked weekly, where profits on this side are being sacrificed, but the volume is very much below that of February and early March, when wheat prices were around the dollar mark.

Another disability which millers are suffering from is what is termed "War Babies." During the war years, when the European demand was large and urgent, nearly all the large mills increased their capacity, which was already on large export trade basis. Now this capacity is not being utilized, not even up to 50 per cent. at the present time, while overhead expenses are heavy and practically stationary. There was also a number of small mills, that had been idle for many a long day, started up during the war years, and those that are still running are scrambling for a piece of the business that is going, and one or two of the larger mills are also fighting hard for business. It would not be surprising to see a little "cut rate" war in the near future, one prominent miller said to-day.

There has been no change in official prices since last report, present quotations being as follows: top patent spring wheat flour $8 bbl., seconds $7.40, first clears $6.80, jute, mixed cars, 30-day terms, delivered at any point between Fort William and the western boundary of Manitoba. In 98-lb. cotton bags, prices are 20c. over the jute basis. Saskatchewan points take 10c. under these prices, and from eastern Alberta to the Pacific Coast values rise progressively to $8.30 for top patents at Vancouver and like points. Vancouver Island takes $8.35 for top patents, and Prince Rupert $8.50.

Millfeed.—The demand for millfeed is excellent, the larger part of which is confined to domestic trade. Western provincial governments have been good buyers of bran which they are distributing to the municipalities in preparation to fight the grasshoppers, if they appear this spring. There has been no change in prices, which are: bran $22 per ton, and shorts $24, in bags, delivered, Winnipeg territory.

Oatmeal.—The strength which the oat market has displayed is reflected in the price of oatmeal and rolled oats. This week there is a further advance of 10c to 15c per bag reported. The demand is not strong. Rolled oats are quoted at $2.70 to $2.80 in 80-lb. cotton bags, delivered, Winnipeg territory.

Rye Flour.—Market continues dull, both domestic and export buying being very light. Prices remain firm, there being no change reported by the local mills. Quotations are: best patent flour $7.00 per bbl., in 98-lb. bags; medium $6.00, dark $5.00; rye meal $5.00, delivered, Winnipeg territory.

Linseed.—While the demand for linseed products is not urgent, there is a fair volume of business being worked. Prices are holding steady, quotations being: oil cake $43 per ton, and meal $45, in bags, carload lots, mill points. Smaller lots will be slightly higher. Raw oil is quoted $1.00 per gallon, and boiled $1.03.

THE GRAIN MARKETS

The wheat market has not been particularly active of late and up till around May 19, when the undertone turned decidedly weaker, prices were very steady. On Monday, May 8, while the Winnipeg market was closed observing Arbor Day as a holiday, a strong sentiment made its appearance in American markets, and this strength appeared to be reflected in the Winnipeg market on Tuesday, May wheat closing on that date at $1.38⅝. Considerable short covering was going on in the market during the next two days and May wheat made material advances, closing on May 11 at $1.42⅞. At this level the market was very steady for several days until on May 17, the market made substantial advances on entirely unexpected higher cables, May wheat closing at $1.43⅞. This proved to be the peak of the advance, from then on prices working gradually lower, until on May 19, weakened by considerable liquidation of the May future in Chicago, the market broke over two cents and May wheat closed at $1.38½, 5⅜c under the week's highest closing price.

The chief feature of interest in the wheat market at the present time is the adjustment of the May contract in leading markets, Chicago especially. There still continues extensive operations in the May future in Chicago by leading interests, and it is presumed that every day means the open interest nearer to a point of adjustment. It is claimed that considerable merchandising of wheat is going on in American varieties at actual losses, the purpose being to remove available stocks from the original delivery point. While this abnormal condition exists in the May position in Chicago, it is reflecting into all other futures, and as a consequence the trade are very conservative in their operations.

Export business has been comparatively small, cables showing more or less indifference. It is generally believed that the foreigner will need more wheat, but it appears he is in the position to wait until next month, giving the interests on this side time to make final adjustments in the May contracts. On May 19, however, exporters were good buyers of the October future, or new crop wheat, at around $1.25. The old crop is ranging too high to attract the foreigner's bids.

Seaboard advices state that wheat can be bought at lower lake ports at less money than quotations on the market, plus shipping charges. The demand to fill contracts on the tonnage market, which was fairly heavy a week ago, appeared to be well satisfied and new business was reported to be very dull.

for export continually, American varieties are getting the preference at the discount. Considerable quantities of Canadian oats were bought by Americans for mixing purposes.

Barley has been generally steady, largely governed by the action of other grains. Flax has been quiet with crushers operating only in a moderate way. Elevator companies report an increasing country demand for this cereal, suggesting that farmers are likely to sow freely on account of the lateness of seeding operations in other grains in certain areas.

Rye has been rather dull but occasionally there is an excellent demand for the cash article by exporters.

SUMMARY OF GOVERNMENT REPORT ON CANADIAN MILLING INDUSTRY

Winnipeg, Man.—The statement that half of the flour milling industry of Canada is located west of the Great Lakes is proven by a recent official list just issued by the Department of Trade in Canada. There are 1,332 flour milling plants in Canada, of which 617 are located in Ontario and 457 in Quebec with the rest virtually in the West. But many of the largest of the Ontario plants are at Fort William, Keewatin and Kenora, all west of the Great Lakes and close to the wheat growing areas of the West. The Ogilvies, the Lake of the Woods and the Maple Leaf Milling companies all have large plants in these centers, running all the way from 7,000 to 20,000 bbls. daily capacity.

The total value of the output of the mills during 1921 was nearly $240,000,000, and the total capital invested in the flour industry in Canada is about $70,000,000, the salary and wages bill being yearly about $9,000,000. The mill products exported during last year were valued at $61,544,000. The total value of grains exported from Canada during the year was around $350,000,000, a total value of grain and grain products of $410,000,000 in round figures.

Very interesting is the value of mill products consumed in Canada last year. As a people Canadians ate .96 of a bbl of flour per capita, valued at $11.21. Oatmeal and rolled oats each man, woman and child consumed 9.70 lbs, valued at 62c; cornmeal, 4.31, valued at 19c. Very small quantities of barley, rye flour, buckwheat flour and split peas were consumed.

TRADE OPPORTUNITIES

With a view to assisting the Canadian milling trade in the development of a permanent and profitable export business, "Canadian Milling & Grain Journal" publishes in each issue a selected list of trade opportunities, the investigation of which should prove of value. "Canadian Milling & Grain Journal" is taking special pains to ascertain the reliability of each opportunity presented and will gladly furnish any further information regarding them that may be desired.

THE EDITOR.

No. 260.—Messrs. Hermanos & Co., Cartagena, Colombia, South America, is open to receive quotations on Canadian wheat and flour.

No. 261.—The Cattle Food Supply Co., 24 Chapel St., Liverpool, England, wish to get in touch with Canadian exporters of millfeed.

No. 262.—Mr. Louis J. Williams, Port au Spain, Trinidad, would like to hear from Canadian flour exporters desirous of establishing an agency in Trinidad.

No. 263.—Mr. F. F. Guilbert, importing and exporting agent, 7 Square de L'Aviation, Brussels, Belgium, is open to consider the establishment of an agency for Canadian flour and cereal exporters.

ARGENTINE LINSEED SITUATION

Buenos Aires.—Shipments—Flax, 456,000 vs. 701,000 vs. 387,000. Stocks in chief ports, 2,400,000 vs. 2,800,000 vs. 4,400,000. On passage 977,000 vs. 989,000 vs. 1,765,000.

Offerings are not large, but the demand has subsided and export business is being neglected. English crushers are, presently, out of the market, and the United States have not purchased any important quantities for a long time. The remaining linseed available for export estimated 20,000,000 bushels, but this if spread out carefully over remaining 30 weeks of season will allow a weekly export of over 600,000 bushels. England is not expected to purchase large quantities here this year, as the Indian new crop is moving freely and large quantities already destined to English ports.

THE WESTERN MARKETS

The following report furnished by Messrs. Baird and Botterell, 103 Grain Exchange, Winnipeg, shows daily highest price levels from May 13, 1922, to May 27, 1922, inclusive.

	May 13	May 15	May 16	May 17	May 18	May 19	May 20	May 22	May 23	May 24	May 25	May 26	May 27
May Wheat	1.43 3/8	1.42	1.44 1/8	1.43 3/4	1.42 7/8	1.40 7/8	1.39 1/4	1.38 1/8	1.39		1.36	1.35 7/8	1.35 3/4
July Wheat	1.39 3/4	1.39	1.41	1.40 7/8	1.39 7/8	1.38 5/8	1.36 3/8	1.36	1.37 3/8		1.35	1.35 1/4	1.35 5/8
October Wheat	1.25 3/4	1.25 7/8	1.27 1/8	1.27	1.26 3/8	1.25 3/4	1.23 5/8	1.23 1/4	1.24 3/8		1.22 3/4	1.22 5/8	1.22 5/8
May Flax	2.50	2.49	2.50 1/2	2.50	2.47 3/4	2.47 3/8	2.46 1/4	2.44 3/4	2.41 1/2		2.41	2.41 1/8	2.42 1/2
July Flax	2.51 3/8	2.50	2.51 3/4	2.50 1/2	2.49	2.48 1/2	2.46 5/8	2.45 1/4	2.41 7/8		2.41	2.41 1/2	2.42 1/2
October Flax	2.44 1/2	2.42 1/2	2.44	2.42 3/4	2.41	2.41 1/4	2.39	2.39 3/4	2.34 1/2		2.31 5/8	2.33 1/8	2.33 1/2
May Rye	1.08 1/2	1.09 1/4	1.14 1/2	1.14 1/2	1.13 1/2	1.11	1.08 1/2	1.08 3/8	1.09 3/8		1.08	1.05 3/4	1.05
July Rye	1.08 5/8	1.09 1/4	1.13 5/8	1.13 1/4	1.12	1.10 1/2	1.07 1/4	1.07	1.08		1.07	1.06 5/8	1.05 3/4
May Barley	0.69 3/4	0.69 5/8	0.69 3/4	0.69 5/8	0.69 1/2	0.68 5/8	0.68 1/2	0.68 1/4	0.68 1/2		0.68	0.67 1/2	0.67 1/4
July Barley	0.70	0.70 3/8	0.70 7/8	0.70 5/8	0.70 5/8	0.69 3/8	0.68 1/4	0.68 3/4	0.69 1/4		0.68 3/4	0.68 1/2	0.68 1/4
October Barley	0.65 3/4	0.65 1/2	0.66 5/8	0.66 5/8	0.65 1/4	0.66 3/4	0.69 1/4	0.65 1/2	0.65		0.64 1/4	0.64 1/4	0.63 7/8
May Oats	0.55 7/8	0.56 1/2	0.56 3/4	0.56 1/4	0.55 3/8	0.54 3/4	0.54 3/8	0.54 1/2	0.55 3/8		0.54 3/4	0.54 1/2	0.54 1/2
July Oats	0.54 1/8	0.54 1/2	0.55	0.54 3/4	0.54	0.53 5/8	0.53 3/8	0.53 1/4	0.54		0.53 3/8	0.53 1/8	0.53 1/4
October Oats	0.49 5/8	0.49 5/8	0.50	0.49 7/8	0.49 3/8	0.48 3/4	0.48 1/4	0.48 1/4	0.48 1/4		0.47 1/2	0.47 1/8	0.47 1/4

Empire Day—Exchange Closed

Foreign Flour and Grain News

Although there has been no appreciable increase in the volume of flour being shipped to foreign countries more enquiries from English importers and the closing of a fair amount of business for May-June shipment continues to keep the mills fairly busy. The fact that there is no diminution in the number of enquiries for Canadian flour supplies from Old Country buyers would appear to effectively offset the report that United Kingdom buyers have lost confidence in the Canadian flour market because of an unexplained feeling that they are "being manipulated."

The fact of the matter is that the excessive differential which favors United States shipments of flour to Great Britain with other handicaps including the lack of modern loading methods at Canadian seaboard points is seriously retarding the natural development of the Canadian flour export industry and will continue to do so until a permanent remedy has been obtained. In this connection it is to be hoped that the strong movement, which has been launched for the equalizing of Canadian flour export rate, as compared with those prevailing for wheat, will be speedily successful.

The wheat export business in Montreal appears to have opened in a very disappointing manner. Many grain brokers assert that they have not yet fulfilled an order, so inactive has the demand been from Europe for Canadian wheat.

Whether the wheat is being handled by New York brokers in cases where last year it would have been handled by local brokers, is a matter about which there is a difference of opinion; but although trade is slow in New York many think that it is not nearly as dead as it is here. "The New York exporters are underselling us," explained one grain exporter as to why the export business in Montreal was so dead. He continued, "they are willing to sell wheat at a loss in order to get the business, while we refuse to do any business unless we can see that we are going to make a profit on it."

Another broker declared that the New York exporters have the advantage over the local exporters, because their ocean freight rates across the Atlantic are lower than they are here. There is a standard charge of 2s. 6d. (0.57½) a quarter for the shipment of grain from Montreal to England, while in New York the rate is as low as 2s. (0.45) and even lower.

Recent reports say that the New York brokers have got large stocks of grain, which they bought in the fall and the winter and which they have not yet disposed of, and are now shipping it to Europe at lower prices than it could be bought in Montreal today. Some maintain that, when these stocks run out and all the wheat that is brought to New York has come at a higher freight rate than the same wheat could be brought by water down the St. Lawrence to Montreal, that any cheaper ocean freights that prevail in New York will be counter-balanced by this advantage to the local brokers.

RUSSIA—The spring sowing campaign may be considered to have been accomplished (?) with considerable success. All native seed has been delivered to the appointed districts, while most of the foreign seed now on passage to Russia will be in time for sowing. Weather conditions moreover, are entirely favorable, and augur well for the future of the crops.

ROUMANIA—Cold, cloudy weather has been experienced recently with further rains in most districts. Spring sowing is progressing slowly. The low temperatures are tending to strengthen the winter wheat plants.

ARGENTINA—Rains have been reported lately. Damp weather is, of course, unfavorable for conditioning maize, but the rains will probably put the soil in good condition for wheat seeding.

AUSTRALIA—Some advices state that the prevailing weather is too dry to be favorable for ploughing.

FRANCE — The stormy, unfavorable weather which prevailed during practically the whole of May was relieved by a few days of sunshine recently, but forecasts are for still more rain. Spring sowing has been resumed actively, but it is extremely doubtful, owing to the lateness of the season whether wheat will have the full acreage which farmers planned. The condition of winter wheat still receives favorable comment, although some little damage has been caused by floods.

ITALY—Cold, rainy weather is also prevalent in this country. Wheat is growing well, and the plants are in good condition, particularly in the chief wheat producing districts.

AUSTRIA—The condition of the autumn crops is quite satisfactory in spite of the severe winter. Spring sowing has commenced.

JUGO-SLAVIA—The conditions of the crops is unsatisfactory in Bacska and Banat. Wheat and rye are backward in growth, present weather conditions being still unfavorable. In other parts crop prospects are fairly good.

CZECHO-SLOVAKIA—The weather is wintry and frosts are damaging the crops. It is feared that many fields of winter grain will have to be reploughed. Many farmers will grow sugar-beet at the expense of grain.

ALGERIA and TUNIS—Drought is still the dominating note of agricultural reports, and a very serious view is generally taken of the situation. In some districts of Tunis the crop is considered beyond recovery.

INDIA—A special Government forecast of the wheat outturn in the United Provinces gives 13,800,000 quarters, which compares with 11,100,000 quarters last year. The probable wheat outturn in the Bombay Presidency, including Sind and Native States, is estimated 2,660,000 quarters, as against 1,400,000 qrs. in 1921.

GERMANY—Cold weather has again been experienced. The season is four or five weeks late, and a spell of mild warm weather is much wanted.

GREAT BRITAIN—The general demand for home-milled flour is steadily improving and millers report fair bookings during the week. Prices have moved irregularly. In London an advance of 2s. ($.45) was made recently.

The Elevator Operator

NEW U. S. GRAIN-CLEANING DEVICE TO BE GIVEN THOROUGH TEST.

An aspirator to be used in cleaning wheat by removing smut dust and foreign material at the time of thrashing is being developed by the United States Department of Agriculture.

Test with a preliminary model resulted in the removal of approximately one-third of what is ordinarily classed as dockage, and the investigators are optimistic as to the possibility of increasing this amount. Farmers and thrashermen who have seen the model work are quite pronounced in their favorable comment. It remains to be seen whether it can be brought to a degree of efficiency comparable with the commercial cleaners furnished with thrashers sent to foreign countries. There is objection to these latter on account of the cost, weight (approximately 1,000 pounds), the necessity of additional power, and the fact that they are an obstruction on the deck of the thrashing machine. The aspirator being developed is attached to the head of the elevator, hence, causes no obstruction to the deck of the separator. It weighs approximately 100 pounds and requires for operation an additional one-half horsepower only.

Cleaning grain at the time of thrashing and thereby saving the farmer the additional expense for cleaning his grain after it has been put in the bins, or saving the charges for cleaning at the elevator, is a factor in efficient marketing, now being developed by the Bureau of Markets. Arrangements are being made to give the new device a tryout in the spring wheat section of the Central Northwest during the coming thrashing season.

CHEAP BELTS SACRIFICE EFFICIENCY.

In times of enforced economy, such as the present, attention inevitably is called to the matter of increasing the efficiency of production. When profits are nil or near it and money scarce there is a disposition to make those purchases which are imperative in such a manner as to require the least expenditure, and there is a tendency on the part of some to waive some of the requirements of the highest quality in favor of a lower first cost. This is not efficiency, nor is it that higher efficiency which is requisite for true economy, but instead it is a sacrifice of efficiency leading directly to actual extravagance.

Applying these general principles to belting one is familiar with the man who persists in running a worn out and broken down belt at the loss of power and speed in his machines, rather than make the expenditure for a new one; and with the man who will buy a substitute belt because of its lower first cost; and with the man who will buy his leather belt from the lowest bidder, fondly hoping to secure value without sufficient consideration.

Some of these men possibly are fooling themselves into believing that they are making a wise expenditure, but most of them well know that they are sacrificing quality and efficiency to save a little money for a very short time.

Of those who reason in this way, possibly some of them are working under conditions which make any other course impossible, but with most of them the pursuit of such a policy is the result of a depressed psychologic condition. Most of them know full well that the present condition of depression at its worst is but temporary, and that sooner or later there will come a time when their plants must be operated to full capacity, and when the inferior substitutes which they now may purchase because of a low first cost, will be thrown out because of their inefficiency, and that additional expenditures then must be made to secure belting which may be depended upon to do the work.

Efficient Production Imperative.

The demands for efficient production to-day are imperative. Competition at the present time, and in the future as far as can be seen, is going to be of the most intense character, and only those manu facturing plants operating under the most favorable conditions, and in the most efficient manner, can hope to prosper. The most favorable conditions and the highest efficiency comprehend in every manufacturing plant an equipment of leather belting of a superior quality, and this can be secured only by paying for it an adequate price, and any saving in expenditure at this time can be made only by a sacrifice of this efficiency.

MAKING RAPID PROGRESS ON NEW ELEVATOR PLANT AT FORT WILLIAM

Fort William.—Mr. H. Sellers, of the Northwestern Elevator Company, for whom the Barnett and McQueen Construction Company are erecting a huge concrete elevator in west Fort William, who returned recently from California, where he has been visiting since last January, has expressed himself as being greatly pleased with the rapid progress made by the Barnett and McQueen Company. It is expected that the new elevator will be completed by the end of August. The sub-structure of the new plant has been completed and the pouring of concrete into the forms for the storage tanks will be completed very shortly.

In connection with power for the new addition, Mr. Sellers was not prepared to make any statement in view of the controversy which exists regarding the power question. He stated, however, that six hundred additional horse-power would be required. The present elevator used five hundred.

THE ORIGIN OF THE WORD WHEAT.

The word wheat can be traced back to the old English word hwaete allied to hwit, meaning white. The most ancient languages mention wheat, and the fact that it has been found in prehistoric dwellings of man is proof of its antiquity.

The Chinese cultivated it 3,000 years B.C., and it constituted the chief crop of ancient Egypt and Palestine. Its geographical origin is somewhat uncertain, but the best existing evidence seems to point to Mesopotamia as the original source. At least there is rather wide acceptance of the belief that wheat grew wild in the Tigris and Euphrates valleys and that it spread from there to the rest of the world.

The Elevator Operator

MAINTAINING BOILER FRONTS

It is the custom in some plants to paint the boiler fronts black, once in a year or two, and then give them little or no attention until they are painted again. This is not regarded a good plan because it leaves them untidy for a greater portion of the time. If they are wiped with waste that is saturated with oil that has come off from the engine, and other machinery, once each week, in a large majority of cases they will look good at all times, and will not need repainting for several years, thus giving the boiler room a better appearance than it otherwise could have.

When removing ashes from the pits, they should be well wet down to prevent dust from covering the fronts and during this process the damper ought to be wide open. Even the bed coals may prevent the draft from taking all of the dust caused by turning a stream of water into the ashes. If the furnace door is opened a few inches, it will prevent this dust from going higher. A small water pipe, duly perforated and located permanently in the ash pit, is more convenient than a hose.

GRAIN ELEVATORS AND FEED MILLS

The success of many grain elevator operators in the operation of feed mills has been so pronounced that the wonder is every town does not support at least one grain dealer who has an up-to-date feed grinding and mixing plant. Most grain dealers have found that the installation of up-to-date facilities not only increased the income from their investment in elevator facilities, but gave them an outlet for much off grade grain and screenings which could not have been shipped to central markets to advantage.

INVINCIBLE GRAIN CLEANER COMPANY GETS BIG SOUTH AFRICAN CONTRACT

What is possibly the largest single order for Grain Separators that has even been placed with one firm has been secured by the Invincible Grain Cleaner Company, of Silver Creek, N.Y., for the furnishing of forty-six of their "Invincible" Separators for the new South African Elevator system.

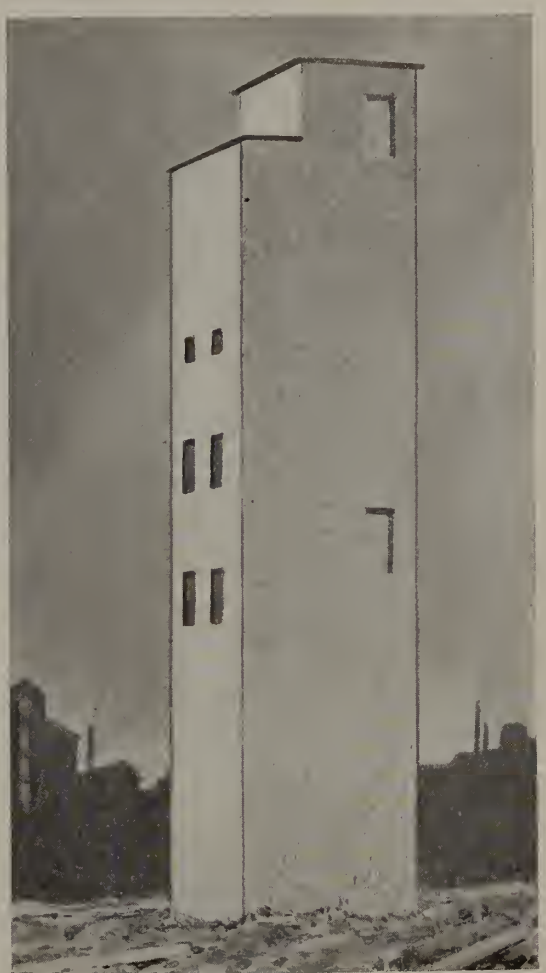
As previously stated in "Canadian Milling & Grain Journal" the Government of the Union of South African States, in conjunction with the United Railways of that country, have undertaken the erection of a number of elevators, ranging in capacity from 40,000 to 120,000 bushels. Those elevators with a capacity of 72,000 bushels will be equipped with one Invincible Separator, while those having a greater capacity will have two of the well-known machines.

The manufacturers of the "Invincible" Separators are naturally pleased with the magnitude of the order and rightfully regard it as a substantial mark of recognition of their efforts to build nothing but the best.

Everything comes to him who waits, but he who doesn't advertise waits longer.

THE BUFFALO-MONTREAL GRAI NTRADE

The movement of grain from the upper lakes to Montreal by way of Buffalo is active, sometimes three or four cargoes clearing from the American port in a day, largely because the elevators at Port Colborne cannot make the transfers fast enough. The rate of freight from Buffalo is 6½c per bushel on wheat, with a small cost to the vessel for handling. Now that the longshoremen's strike has been settled, Montreal shipping interests are looking for an active movement of grain and a big export season.



Concrete grain dryer of the Midland Elevator Co., Midland, Ont. Built by Messrs. McFarlane, Pratt, Henley, Ltd., Contractors, Midland, Ont.

LEAKING CARS AND GRAIN LOSSES

Ottawa.—The cost of leakages of grain from cars between points of shipment and the head of the lakes during the past railway year, was $193,339.48, according to information given to the House recently by Hon. W. C. Kennedy, Minister of Railways. The amount charged to operating expenses for grain doors during 1921 was $384,467, of which amount $55,843.26 was for repairs to grain doors.

AN EXPERT VIEW ON DUST COLLECTING.

The use of dust collectors and dust collector systems has become a necessity in many forms of industry besides milling and grain handling. It is necessary not only to obviate the danger of explosion in some cases, but as a sanitary measure as well as the recovery of valuable by-products in other cases. The use of dust collectors in some form is practically necessary in every industry that involves the dry grinding of materials. Chemical industries employ such devices and Mr. M. I. Dorfan, of the Allis-Chalmers Company, New York City, recently prepared a paper on the subject which was reproduced in a recent issue of the New York Journal of Commerce.

After a preliminary statement of the subject, Mr. Dorfan proceeds to say that the simplest form of dust collector is the settling chamber, and the principle on which it operates is merely a reduction in velocity, of the dust carrying air and dependence on this reduced velocity to precipitate the dust. A settling chamber has a certain efficiency in that the reduction of velocity will precipitate some of the coarser dust, but the fine dust continues on through the outlet.

The next step in the development of the dust collecting art was the development of the cyclone or centrifugal separator. Its principles of operation are as follows: 1. Centrifugal motion is induced by the shape of the exterior shell and construction of the interior of the device, and because of the difference in specific gravity of the air and the dust, the heavier dust particles, due to centrifugal force, are thrown to the sides of the device and in that way precipitated. 2. The reduced velocity in the interior of this device, due to its having a larger cross sectional area than the inlet pipe, gives the same results derived from the settling chamber.

Two Types of Cyclone Devices.

Of cyclone devices there are two general types, that is, the suction and the pressure type. A further development was the use of liquid sprays in connection with either ordinary settling chambers or cyclone or combination of both.

All of the aforementioned devices are applicable to easily precipitated dusts, and by this is meant particularly dusts of comparatively coarse character. For the control of the finer dusts there was developed finally the filter type of dust collector. In its original stages it was nothing more than a series of screens or bags which were used for separating dust from the dust laden air. These filters were often employed in connection with settling chambers, cyclones and many other innumerable combinations as a final collecting medium.

The electrical precipitator, one of the important steps in dust collection art, is also one which must be mentioned.

In the opinion of Mr. Dorfan the most important step in the development of dust collecting machinery was the invention of the all automatic self-cleaning filter type dust collector. In this machine all the advantages of the foregoing devices exist, and furthermore, there are many advantages which this type of machine has over any of the others.

MONTREAL HARBOR BOARD TO INSURE GRAIN

In addition to their many other activities the Montreal Harbor Commissioners have now arranged to go into the insurance brokerage business against fire and explosion in grain elevators under their control. While the commission will not do the actual insuring, they have made arrangements to provide for insurance against explosion and fire on all grain committed to their care, in the harbor elevators Nos. 1 and 2. This insurance will be free during the period that grain in the harbor elevators is stored free, and thereafter the insurance will be billed against the owners of the grain, with the regular storage and insurance charges, the insurance being charged at the current rate, for which arrangements will be made by the Harbor Commissioners.

PNEUMATIC ELEVATORS AT ANTWERP.

A considerable quantity of grain is imported through Antwerp for consumption in Belgium and for trans-shipment to northern France, Switzerland, Germany, Poland, and Czecho-slovakia. For the purpose of handling this grain the city has 16 pneumatic floating elevators of a modern type and a larger number of others specially constructed for transferring the grain from the vessel to railway or dock, or to barges moored alongside.

During 1914 the unloading of grain was effected by 77 elevators, which were used 1,002 times, handling 640,201 tons of grain from 512 vessels. In 1921 there were 171 elevators used a total of 2,433 times, discharging 1,662,989 tons of grain from 1,274 vessels.

OBITUARY

Toronto.—Word reached the city recently of the drowning near Calgary recently of Mr. W. A. Stevens, a prominent grain buyer of that city, and well known in Toronto. He had gone in bathing at Chestermere Lake and his death was accidental. Mr. Stevens came originally from Chatham, Ont.

Fort William.—The earliest of all the pioneers in the grain business, one of the most experienced and widely-posted grain men in Canada, passed away recently when John Willard Irwin, manager of the Consolidated elevator at west Fort William for the past sixteen years, passed away, after an illness of some weeks duration.

The late John Willard Irwin knew the grain business from the very beginning, and he and his stalwart sons are among the best-known grain men in western Canada. He was born in Kingston, Ont., sixty-one years ago, and learned the grain business with Richardson and Sons, working in their elevator at Kingston. He came to Port Arthur thirty-nine years ago, and was the first foreman in the first elevator built here, the Horn elevator, now known as Gillespie's. In 1883, when J. W. Irwin was foreman at Port Arthur, grain was shoveled by hand into wheelbarrows, and the young foreman superintended the loading of the first grain boat, the steamer Erin, which left Port Arthur with the first lake cargo of grain from western Canada in 1883.

How Montreal Has Solved its Grain Handling Problem

When it became apparent last year that the tremendously increased quantity of grain pouring down from the great lakes was swamping the handling facilities of the port of Montreal, and when, indeed, at one time one could see in the basins of the Lachine Canal, grain boats tied up four deep awaiting their turn to load at the elevators, drastic and speedy action became necessary.

Following a consultation of the Harbor authorities with representatives of the transportation and grain handling interests there was evolved a scheme which, with the improvements which have been made in anticipation of this year's business, is now declared to be the last word in quick grain handling efficiency.

The work is being done through a clearing board consisting of the general manager and secretary of the Harbor Board, Mr. M. P. Fennell, jr., Mr. E. N. Todd, general shipping freight agent of the Canadian Pacific Railway, Mr. C. J. Smith, manager of the Montreal Warehousing Company, and Mr. T. R. Enderby, operating manager of the Canadian Steamship Lines.

Although millions of bushels of grain are involved the clearing system employed is remarkably simple, the whole idea revolving round the checking of the unloading of grain from the lakes until there are vessels at hand in Montreal to reload it into and by so arranging its transportation that it reaches the port practically at the same time which will carry it away again. By keeping track of all shipping en route from the lakes or from the ocean, of all rail freight, in fact, of all means for the transportation of grain, and balancing what comes in with what must go out. True, there are technical details, markings and figures, which it takes a shipping expert like Mr. Fennell and his associates to understand, which mean far more to them than to any layman, but there is nothing that the latter could not comprehend in the main working of the system.

Three Large Blackboards

There is a large room set aside in the offices of the Harbor Commissioners on the waterfront, along three sides of which are blackboards. Upon these are chalked different columns, wherein are marked the names, position, class and volume of cargo and other particulars of the vessels. Thus, in one column is shown what boats have left Fort William, the date of departure, the destination, the kind of grain carried and the quantity. In the next is a list of boats at Port Colborne waiting to be unloaded. Instead of allowing the elevators at Port Colborne to become congested, the transportation board here does not permit any boat to unload grain until it has arranged for another vessel, destined for Montreal from the ocean, to take the cargo. When such arrangement has been made, the board provides transportation from Port Colborne to Montreal and sees to it that the cargo reaches here just in time to be loaded up again, thus obviating the necessity for storage.

In another column is a list, checked daily, of all the grain in storage at Port Colborne awaiting shipment. Another gives details of all lake vessels as they pass through the Welland Canal, and yet another contains particulars of all vessels upon the ocean, from whatsoever Port, making for Montreal. The position of these; in fact, the position of all boats in movement connected with grain, is being continually checked by telegraphic communication and, in some instances, by radio, so that the Montreal statistics are always accurate and absolutely up to date.

There are three columns left on the blackboards. One is for the movements, by rail, from Grand Trunk bay ports, the same from Port McNicoll. The third column details the orders for loading of ocean vessels.

How it Works

So much for the system. How does it work out in practice. Let us take an example from the layman's viewpoint. Suppose two vessels leave Fort William, each with 100,000 bushels of wheat. In due course, they reach Port Colborne, but they are not allowed to unload and congest the port. There are other boats already awaiting unloading and they must wait until their cargo is required. In time, they reach the head of the list of their class of grain. Meantime, the board at Montreal learns that there is an ocean vessel, due in Montreal say on May 15, which will take a cargo of 250,000 bushels of wheat. Those two boats are then unloaded at Port Colborne and their cargo, with another 50,000 bushels, is brought to Montreal in such vessels as the board shall name. It is scheduled to reach here at approximately the same time as the ocean vessel, thus there is no delay.

Re-loading Arrangements

But the work of the board does not end there, it must also look after the re-loading arrangements. Accordingly, they get in touch with the Montreal agents of the ocean boat, tell them that 250,000 bushels of grain will be ready for it upon arrival and request them to furnish the necessary orders.

By constant communication with the railroad companies, the same system of checking is carried out with rail shipments as is observed with the boats. In other words, the whole system of grain movement, both to and from the port of Montreal, is thoroughly organized and supervised. The traffic is so regulated that congestion is eliminated all along the line, there is no delay and no storage. Port Colborne, which was heavily overloaded before the work of the transportation board commenced, will now be straightened out in a few days' time.

In short, the harbor authorities have evolved a system which has solved the problem of grain transportation for all time and attained such efficiency as to render it well worthy of imitation anywhere.

VENTILATION OF GRAIN ELEVATORS.

Dust collectors rank as highly essential equipment in terminal elevators and in the larger country plants. But the average house of 10,000 to 25,000 bushels storage has not partaken of the dust collector benefits because the cost of installation has been prohibitive. Experiments now being made, however, indicate that the small house owner will shortly be able to obtain the same results through the use of properly installed ventilators.

Elevator, Mill & Personal Notes

Bradwell, Sask.—The State Elevator Co., Ltd., are erecting a standard 30,000 bushel house here. The old building of the company was burned down last January.

Fort William.—The work of pouring the concrete for the dock at the site of the Parrish-Heimbecker elevator is progressing rapidly. Mr. W. R. Sinks, general superintendent, Canadian Stewart Company, of Chicago, was at the head of the lakes for a few days recently, looking into the progress of the work. He stated that his firm, which has the contract for the building of the elevator, will have the building completed ready to take care of the 1922 crop.

The Toronto Milling Company, Ltd., which operates a mill at Streetsville, Ont., capable of turning out 750 barrels per day, has just been reorganized through the infusion of new capital, and the selection of another board of directors.

Interests close to Mr. Frank L. Culver, the president of the Beaver Consolidated and the Kirkland Lake Gold Mines, are now in control, and propose adopting an aggressive campaign, looking toward an expansion in business. The first thing that will be done is to double the capacity of the flour mill.

The new directorate is composed of the following: Messrs. F. L. Culver, president; F. D. Mercier, vice-president; W. Murray Alexander, secretary-treasurer; F. C. Finkenstaedt, Bay City, Mich.; William Stewart, Alex. Graham and B. Neilly.

Merrickville, Ont.—The Grenville Milling Co., Ltd., with headquarters here, has been incorporated with capitalization of $25,000.

MORE ELEVATOR SPACE DISCUSSED

Major Graham Bell, deputy minister of marine and fisheries, attended a meeting of the Grain Elevator Commission, at the Harbor Commissioners' offices recently, to discuss the necessity for increasing the elevator accommodation and general grain handling facilities possessed by the port of Montreal. At the conclusion of the meeting it was stated that something would undoubtedly be done, but that the results of the session were too intangible to permit a definite statement being issued.

Mr. W. L. Parrish, president, Messrs. Parrish & Heimbecker, Ltd., grain and commission merchants, Grain Exchange, Winnipeg, was a recent visitor in Montreal.

Mr. D. L. Bole, president of the Bole Grain Co., Ltd., Winnipeg and Fort William, Ont., spent some days in Fort William recently.

Mr. Stewart Langille, of the Gillespie Elevator Company, Winnipeg, was a recent visitor at Fort William.

Mr. H. S. Van Scoyoc, sales manager of the Canada Cement Company, Ltd., was elected president of the Montreal Publicity Association at the recent annual meeting of that body.

Mr. G. T. Douglas, grain merchant of Buffalo, N.Y., was introduced on 'Change while in Montreal recently by Mr. J. M. Hancock.

Mr. Leslie F. Cameron, son of the late Sir Douglas Cameron, president of the Maple Leaf Flour Mills Co., Ltd., was seriously injured in an automobile accident at Vancouver, B.C., recently.

Mr. L. Pfeffer, of the L. Pfeffer Milling Company, Ltd., Listowel, spent a few days in Toronto on business recently.

Col. Noble, a prominent grain man of Cooksville, Ont., was a recent business visitor to Toronto.

Mr. J. G. Wolverton, president of the Wolverton Milling Company, Wolverton, Ont., was a recent visitor to Toronto.

Mr. S. R. Stewart, of the New Hamburg Milling Company, New Hamburg, Ont., visited the Toronto Board of Trade recently.

Mr. R. A. Thompson, president of the Dominion Millers' Association, is slowly recovering from his protracted illness with scarlet fever. Although not yet clear of quarantine Mr. Thompson is considerably better and expects to be about in a few days. His many friends wish him a speedy and complete recovery.

Mr. W. C. Omand, Royal Bank Building, Toronto, is still confined to his house with illness, although he is able to pay brief visits to his office.

Mr. C. B. Watts, secretary of the Dominion Millers' Association, Toronto, was in Ottawa recently with other delegates from the Dominion and National Millers' Associations, to confer with the Minister of Agriculture on the subject of feed standards.

Mr. W. A. Hewitt, of the Maple Leaf Milling Company, Toronto, spent a few days recently in Port Colborne and Buffalo.

Mr. F. H. Peck, of the mill feed department of the Maple Leaf Company, Limited, Toronto, spent a few days in New York on business recently.

Mr. Wm. W. Hutchison, Montreal, vice-president of the Lake of the Woods Milling Co., is now in the West. Following a brief stay in Winnipeg Mr. Hutchison left to inspect the company's mills at Keewatin, Portage la Prairie and Medicine Hat.

Mr. P. MacLachlan, manager of the Dwyer Elevator Co., Lumsden, Sask., received an order recently for 6,000 140-lb. sacks of flour to be shipped by the end of the month to the Russian Relief Fund Organization.

The Milton Hersey Co., Ltd., analytical chemists, Montreal, has taken over the Sneddon laboratory, opening up a new department for flour and grain work, at 508 Paris Building, Winnipeg. This is an old established firm, and has been in operation for the last 30 years. Its western branch has been active for the past six years in Winnipeg. V. J. Melsted is western manager.

Dr. T. Thorvaldson, head of the Department of Chemistry, University of Saskatchewan, Saskatoon, Sask., is expected to be put in charge of the work to be undertaken by the University with reference to the testing of the moisture content of oats.

THE PRACTICAL MILLER

THE PROBLEM OF ADEQUATE GRAIN STORAGE FOR THE SMALL MILL

A problem which frequently faces the operating owners of small milling plants concerns the lack of proper handling and storage capacity for their grain. The problem, perplexing at any time that it comes up, is all the more acute when the mill owner is threatened with an interruption of his grain supply from car shortage or any other cause. Another thing. Proper storage facilities for a good supply of grain enables the small mill owner to take advantage of low prices and lay in supplies.

As an illustration of what it considers an admirable example of grain storage facilities for small mills, "Canadian Milling & Grain Journal" presents herewith a brief description of a 35,000 bushel elevator constructed for the Fargo Flour Mill Company, Fargo, N.D. by the Hickok Construction Company of that city.

Plant of the Fargo Mill Co., at Fargo, N.D., built and designed by the Hickok Construction Co., Minneapolis, Minn.

The layout consists of semi-circular bins, separated by a rectangular area which contains the work floor at one foot above grade and is divided into bins above the work floor. The elevator is 22 x 36 feet on the ground, the semi-circular bins have a depth of 83 feet. The width of the building was determined by the available space between the tracks.

Elevator Has Nine Bins

There are nine bins in the elevator. Local grain is received over a 10 ton 26 foot Howe scale located in the driveway, which is built of concrete and tile. The only wood used in the elevator being in the scale frame and dump platform. The driveway is 14 feet wide, with doors of the folding garage type. The driveway and work floor are well lighted by a skylight in the roof. The scale is fitted with a combination wagon and auto truck dump.

The pit has a capacity of 200 bushels, and grain may be elevated by either leg. On the opposite side of the house there is a car pit of 250 bushels capacity. This pit is covered with watertight steel doors in two sections. When the section next the car is folded back a winged hopper comes into position. Grain is unloaded by an automatic car shovel and may be elevated by either leg.

Two sets of scales are provided in the cupola, a 1,000 bushel per hour Richardson automatic which weighs grain to the mill, and a 300 bushel Fairbanks hopper scale weighing grain into the bins from car and also for shipment. The automatic scale is located above the hopper scale so that both can be used simultaneously as a check.

There are two stands of steel elevator legs, capacity 1,500 bushels per hour each. Each leg is driven by a 7½ H. P. General Electric motor, reducing speed by link belt silent chains enclosed in dust proof, oil tight casings. The motors are located in a dust proof room constructed of cement plaster on metal lath.

A manlift provides ready access to the cupola. The distributors were especially designed for this elevator, all spouting is of steel. The Strong-Scott Manufacturing Company, of Minneapolis, Minn., and Winnipeg, Man., furnished the transmission machinery, steel legs and spouting. The cup belts are of 5 ply Riverside Rubber.

On the work floor is a No. 60 Dual Marquis cleaner and a Carter disc separator, for which Strong-Scott, of Winnipeg, are the Canadian agents. A 7½ H. P. General Electric motor drives the cleaners and car shovel. A 2 H. P. motor drives the pit conveyor and a 1½ H. P. motor, the air compressor for the Globe dump. This motor is automatically controlled by a General Electric diaphragm pressure switch which insures sufficient air pressure at all times.

Dust from the cleaner is blown to a dust collector located above a concrete and tile dust house.

While this elevator is of small capacity, it affords every facility needed for receiving grain and the first cleaning, with enough bins to keep the grades separate. An elevator of this size will serve a 200 to 500 barrel mill very efficiently.

WHEN YOU WANT SOMETHING

Whatever you may require in the way of new machinery, equipment, or mill or elevator supplies you will find someone to furnish you in the best and most improved manner in the advertising pages of "Canadian Milling & Grain Journal." The old adage, "A Stitch in Time saves Nine," applies as surely to the miller and elevator man as to any one engaged in any other line of endeavor. Twenty-five dollars' worth of repairs now may save you five hundred dollars' worth later on, while, as for the contemplated addition of new machinery or the extension of the existing plant, there is no time like the present.

THE PRACTICAL MILLER

MILLER AND CEREAL CHEMIST MUST CO-OPERATE TO PRODUCE BEST RESULTS.

Co-operation is the foundation upon which the miller and the cereal chemist should base their professional relationship. The capable head miller has spent years of intensive application and serious study that he might be fitted for the responsibilities of his position. The same may be said of the truly capable cereal chemist.

A knowledge of cereal chemistry in a general way is beneficial to the miller. Likewise a fair understanding of the processes of milling is good for the cereal chemist. Neither need have a technical training in the other's chosen field of endeavor. Each should, however, understand the significance of the results obtained and the determinations made and be technically trained in his own profession or science.

Long before the advent of the cereal chemist, millers who had mills properly flowed and understood the niceties of the mechanical adjustments produced flours the equal of any to-day, with all its elaborate equipment, but that was in the days of the virgin soils which gave to practically all wheat those qualities that now are obtainable only through scientific blending or treatment.

The contaminations of wheat on the outside are all known to the practical millers. Processes and machinery have been devised for their successful elimination. The dangers lurking on the inside are no less, and often greater. These it is the province of the cereal chemist to bring to light or make manifest.

Once in possession of all the facts bearing upon the raw material the practical miller can and does blend his wheat so as to produce the superfine flour of which the housewife and baker are so proud.

Co-operation and collaboration between miller and cereal chemist does not cease here however. It is only the beginning. Throughout the processes of manufacture the miller has been calling his skill and knowledge into play and applying such tests as are necessary to insure a finished product equal to a fixed standard.

The cereal chemist again applies the tests which are wholly within his sphere. In a vast majority of cases the results are all that are desired. If not, the facts are placed before the miller that the proper remedy may be applied. It may be that an analysis of every stream would have to be made in order to obtain the necessary data, but the remedy is left to the only one capable of applying the remedy.

In no case does the one seek to invade the province of the other, since special training is required by both and the duties of each position would preclude that possibility. By this is not meant that exchange of ideas and discussion shall not be had; on the contrary this is to be encouraged as most essential for the promotion of co-operative success.

A mill owner might be likened unto the ship owner who sends his ship to sea and the head miller to the captain of the ship. The owner feels reasonably safe to trust his ship to the captain because of his great experience and he knows he has charts to show all the fixed hidden dangers. There are, however, hidden dangers such as derelicts, etc., the presence of which must be ascertained from day to day and location wirelessed or otherwise communicated to the captains by proper authorities. In the milling field it is the function of the cereal chemist to ascertain the changing dangers, not possible to be on the chart of the head miller's experience and immediately make them known to him for his guidance.

Zeal on the part of both the head miller and the cereal chemist is to be encouraged. Of late, in the milling press, there has been hints of rivalry among the head millers and cereal chemists — hints of usurpations of powers, etc.

There is no ground for such a feeling and it is to be deplored. The real executive in the department of manufacture is the superintendent or head miller. The cereal chemist acts in a consultive way or advisory capacity. There is work enough for all and honor enough for all. There should be co-operation and harmony from the president and the manager on down through all the varied branches of the industry even unto the least, for all are interdependent. Upon co-operation and harmony rests success.

HINTS FOR THE SMALL MILLER.

Watch the character of the oil drip from the journal boxes, and if of a grayish color you may be very sure that the journal is eating out the babbit, where it is a babbited box.

Watch every belt where it passes through the floor or where running close to head blocks, that they do not rub. Wherever they touch they will get worse, as the rubbing will heat up and stretch the belt on the edge, and it will continue to get worse.

Where static electricity is found accumulating on a belt or machine it should be conveyed off, as it has a tendency to dry out and injure the drive belt.

The more lace leather the miller uses the more trouble he will have and the more hours' loss in running his mill.

The more men that the miller has around the mill that are allowed to handle the cash, the more the leakage there will be at the cash drawer; it may not be from pilfering, but men make mistakes.

Remember that remarkably little suction is necessary to keep a line of rolls perfectly cool and dry when the suction spouts are kept free and clean. Each end of the main suction trunk should have removable caps like a bucket lid so as to give it a good cleaning once in a while.

It is just as necessary on closing down the mill to examine the journals for hot boxes, as it is to oil them in starting up. You may not have to put your hand on every box, but a miller with a good smeller will stay on the safe side if he takes his regular trips up and down when the mill is shut down.

The miller should take no risks whatever with a runaway, balky horse or truck, as courts and juries are too prone to look at the fellows' need, and over-

THE PRACTICAL MILLER

look the justice in cases of suits for damage. Many times where it is entirely the man's own carelessness, millers have been soaked for heavy damage. The best way is take out indemnity insurance and make all your men pay for it.

Deal fairly with every customer, and demand the same treatment from them in every little trade, stressing the matter from the standpoint of what is right between two men.

A careless man in oiling, sweeping, cleaning up grease, and in leaving tools scattered over the mill, is a very dangerous man to have around. Carelessness has been the cause of more fires than any one thing that can be thought of in a flour mill.

ELEVATOR HEAD HOUSING

If an elevator head is made in the manner shown it can be removed very easily when necessary. The head should be cut through the center as shown in

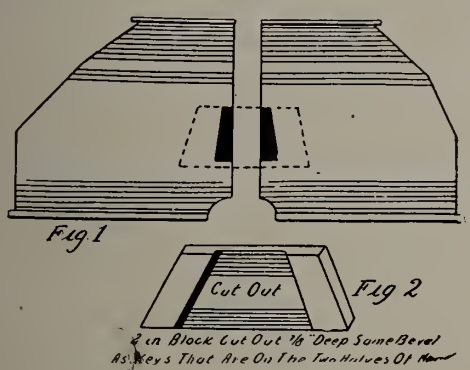


Fig 1. For fastening the two halves together, a key is screwed to each half and a block cut as shown in Fig. 2 is drawn down over these two keys, clamping the two halves together firmly.

FIGURING PRODUCTION COSTS.

In figuring cost of production the owner or manager should always charge up a salary. Figure price of wheat per barrel, delivered; wages, power, sacks, freight, light, selling, office expense, interest, insurance, etc.; in fact, every item together; then add selling price of all products together and deduct total expense per barrel, and the remainder is the profit.

There is a great deal higher expense in milling a barrel of flour than any one can guess, and guessing is very dangerous, indeed, when operating a mill.

The miller who is paying $1.25 for wheat and selling flour at $8.50, is safe, but others are far from it. It pays to work on actual facts in sending out quotations on mill products.

SOME LIGHT BELTING HINTS

The judicious application of a reputable dressing to leather and cotton-woven belts (other than balata) will prevent slip and ensure the efficient running of a slack belt. A dressing should act as a nutrient, and so far from causing deterioration, should considerably lengthen the life of the belt. If the belt ordered from the manufacturer is for a specific drive, the full measurement must be given, so that the manufacturer may allow for the initial stretch incurred when putting the belt on. If the belt is cut by the belt man from a length held in stock, the man must take the stretch into consideration, otherwise there will be considerable wastage. Thick belts should not be used when a thinner belt can efficiently perform the task, and here the camel hair belt, by reason of its lightness and extra strength, is superior to leather in many cases.

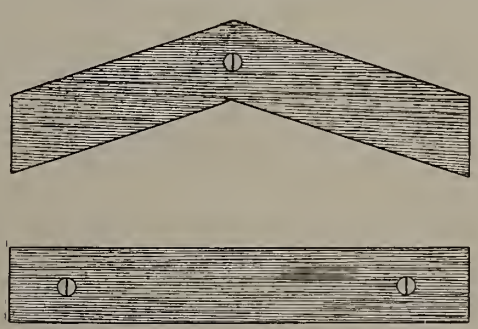
VITAMINES IN WHITE BREAD

Opponents of white flour and white bread call attention to the lack of vitamines in bolted wheat flour and cornmeal as a reason for adopting the unbolted article as food. They lose sight of the fact that the whole grains themselves are not very rich in vitamines. But when white flour is made into bread, the bread does contain the fat soluble "A" vitamine; and when the bread is eaten with butter or in milk, the ration is rich in this essential vitamine.

A writer in the Bakers' Helper draws attention to the fact that yeast contains four times as much vitamine as spinach and that yeast propagates four to six times and sometimes more during the fermenting period of the dough. That is, an ounce of yeast in bread is equal to a pound of spinach in vitamine value. And this does not include malt extract, milk, butter or other things that may be mixed with the flour, or the butter eaten on the bread or the milk eaten with it. White bread is one of the best of foods.

FOR THE MILLWRIGHT'S BENCH

Here is a sketch of a new grip for the millwright's bench which very well takes the place of the old-fashioned V piece usually found fastened on it. The advantage of this grip is that it takes



hold firmly and prevents the material from shifting. It is easy and simple to adjust. If wide material is being used, just widen or narrow the space between the pieces.

"Did your wife have a complete trousseau when you were married" "I should say so. Why, I didn't have to buy her any clothes for three weeks afterwards."

THE PRACTICAL MILLER

EXCESSIVE MOISTURE IN STORAGE AND ITS EFFECT ON WHEAT QUALITY

(By a Milling Chemist)

As is probably a well-known fact, the wheat kernel differs from other grain in that it has no husk and is, therefore, comprised in the main of the germ and the endosperm, each of which components has a distinct relative bearing on the other.

The endosperm, or meal body, is the chief content of the kernel and furnishes the nourishment in the development of the germ, which contains the vital principle possessed of that property of growth or germination which under favorable conditions develops the new plant.

As this germ cannot grow in the absence of food, which it can attain only in the presence of a minimum amount of moisture, it is evident that no change takes place in the grain when the moisture contained therein is maintained below this minimum amount. However, as soon as this moisture is increased to above this minimum, as is true in the case of conditioning the wheat in the storage bin by water, germination commences almost simultaneously, particularly so if the temperature is favorable.

This is especially the case with wheat even more so than with many of our other common cereals, in that the wheat is a huskless seed, being practically free from husk, or at the most being only surrounded with a thin skin or shell which is readily penetrable.

As this process of germination proceeds, various chemical changes are taking place in the grain; principally the sugar which is either present or being formed, together with soluble albuminoids and mineral substances are taken up by the germ, the sugar being partly split up into carbonic acid and water whereby heat is generated.

If this germination is permitted to proceed without the supply of air (respectively oxygen contained therein) which possibility is not excluded in closed bins wherein the grain is stored, complete decomposition of the grain may set in on prolonged storage, for which reason aeration by re-elevating is imperative on extended storage, if the grain has become moistened, artificially or through climatic conditions. Of course under the conditions above cited, germination will never proceed normally, but certainly to a sufficient extent as will be evident, to have a notable effect on the character and quality of certain of its chemical constituents, particularly so its gluten content.

However, in order to insure a correct conception of the chemical changes as they are affected to probably only a slight extent by the conditions indicated, it is necessary to give at least a partial description of the germination as it proceeds in the seed when it is sown in the ground for re-development. As soon as germination sets in, the acrospire, which is the leaflet of the growing plant, commences to take form from the germ and grows upward on the outside of the kernel, forming the green blade above the earth, and eventually producing the stalk while the radial which develops almost simultaneously growns downward and sends out a number of shoots that develop into the roots of the plant.

EXTRACTING DUST FROM GRAIN BETWEEN SCOURER AND BIN.

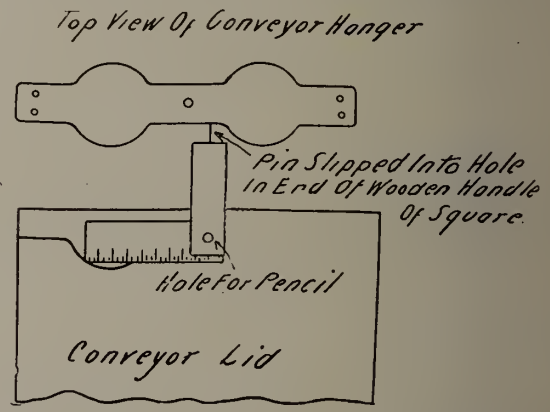
Here is an idea for taking dust from grain after it leaves the scourer and is going to the grinding bin. In the mill in which this idea is used the spout from the elevator to the grinding bin is about 10 feet long. In this spout have been placed nails about two inches apart all along the bottom of the spout.

At the outlet of this spout has been placed a screen running back up the spout about three feet. This screen takes the place of the bottom of the spout and underneath it is a pocket. To this pocket is attached a suction spout which is attached at its other end to the eye of the fan on the milling separator.

The contrivance will take out considerable dust even after the grain is supposed to be as clean as scourers, milling separator, and other cleaning apparatus can make it. The installation takes up very little space and no power so there is only the original cost which is small compared with the good which may be derived from it.

FITTING BOARD TO IRREGULAR SURFACE

In fitting a board to an irregular surface, such as a conveyor lid, a square should be used as shown in the drawing. By sliding the blade of the square



parallel with end of the conveyor lid and keeping the pin at the end of the handle in contact with the surface being fitted to, an exact line will be marked.

CLEANING PASTED BOLTING CLOTH.

To clean a bolting cloth that has been pasted is often a problem. It is troublesome mostly and sometimes the cloth has to be removed, and is even sometimes very hard to clean then.

When one finds a badly pasted reel cloth that while perfectly good is too old to be taken off and replaced, take a flour slick and use the handle end as a scraper to scale off the paste. Another good idea is to use a stencil brush without of course any stencil or paint. By holding the brush steady in the same position, the meshes open, and the cloth is cleaned off perfectly. This method of cleaning does not injure the cloth and an eight-foot reel can be cleaned in half-an-hour.

THE PRACTICAL MILLER

MAINTAIN REGULAR QUALITY IS MAXIM OF MODERN FLOUR MILLING

Regularity of products is one of the recognized maxims of flour milling to-day. The daily work in the mill is always pulling the opposite way to this. Moisture contents will vary, atmospheric conditions change without giving notice, and so on. Practical millers have to devise ways and means of guarding against the hundred and one things which are likely to happen to influence the ultimate quality of the products of the mill. Very few of the processes in modern flour milling are carried on in the dark, and millers of to-day do not depend on rule of thumb so much as their forefathers. The application of science to the trade has helped tremendously in preventing many variations in quality of the mill products. Nearly every large up-to-date mill now has its laboratory and trained chemist.

Primarily to prevent variations in daily work, the miller must keep the quality of the incoming wheats as regular as possible. Separate tests for amount of screenings, moisture content and gluten strength should be made as each consignment of wheat comes along. Moisture tests must be made on the wheats before and after conditioning, and also on the grist as it goes to the 1st break. This moisture content must be kept as regular as possible, any variation being compensated by an adjustment of the rolls. Another useful test is to ascertain the bushel weights of the wheats as they leave the conditioner (by means of the chrondrometer).

Testing Gluten Quality and Strength

Tests for gluten quality or strength should also be made on mixtures ready for milling.

In milling the wheat, the miller is guided in the keeping of regular percentages of products by keeping an accurate account of the produce. An autoweigher over the 1st break registers the amount of clean wheat ground. The net amount of finished products is calculated in percentages on this. The difference between the total finished products and the clean wheat registered represents the "invisible" loss due to evaporation, etc., and must also be watched for regularity.

Samples must be taken from all machines frequently when running, so that variations in stock may be detected and compensated or rectified at once.

Bleached flour must be compared with the unbleached frequently to see that the bleacher is working effectively.

The baking test is one of the best for ascertaining strength, and should be carried out on at least three samples per 24 hours run.

When the foregoing tests and records are carried out, the miller is greatly helped to maintain regular quality and proportionate quantities in products.

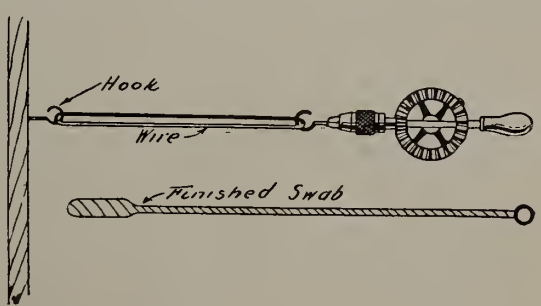
It pays to help the operative in every way possible in the successful operation of the mill, for his path is anything but a bed of roses, and especially if he is not just as experienced as he might be.

WORN OUT MACHINERY EXPENSIVE

In these days, when the practice of economy has become a necessity, there is possibly an incentive to repair and patch machinery that should be placed upon the scrap heap and be replaced by new and up-to-date machines. That this is a short-sighted policy, there is no doubt. Patching and repairing are a delight to some men. No matter how old, badly worn, or useless a machine may be, so long as the wood will hold a nail, or a place can be found for a bolt or a screw, it will be "fixed up" and made to serve for a longer term. It would not matter so much if there were nothing more involved than simply patching the machine or machinery and the time of the mechanic in doing the work, but as a rule there is much more at stake. If a machine breaks down on account of old age, or for that matter for any other cause, the time of the mill is lost, and its earning power stopped. The owner is, therefore, not only paying for the repairs of the machine, but is also losing what the mill would be earning if at work. Frequent stops of that kind, on account of old and worn-out machinery, add losses together very rapidly—enough in a little time to buy a new machine, and still the old ones are on hand to be again and again repaired at the expense of loss of time to the mill. The man who conducts his mill in this way is penny wise and pound foolish. As soon as a machine becomes worn out and decrepit with age, it should be discarded, and replaced by a new one. The result in the end will be money in the pocket of the miller. —Milling, Liverpool.

SWAB FOR CLEANING SPOUTS.

A good swab for cleaning spouts and relieving chokes is made by wrapping a double wire with old flour bags and twisting. One end should be wrapped heavily to provide the swab and by wrapping the full



length the wire cannot scratch the spout lining. A hook shaped like the end of a Morse bit placed in a drill chuck will twist the wire tight when the drill is turned.

There are twice as many reasons why mills fail as there are why mills succeed. Perhaps if we held post mortems on successes in milling as we do on failures, it would be as easy to discover the secret of business vitality as it is the cause of business decay.

THE PRACTICAL MILLER

CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

FOR SALE—50-barrel Midget Marvel Mill with elevators, beltings, etc., and complete installation for flour mill plant. Also grain grinder, ton per hour capacity. Good reasons given for wanting to dispose. Will sell cheap. Terms given for satisfactory paper. Reply Box 145, Carleton Place, Ont.

FLOUR SALESMAN WANTED.—Well-known milling company wants representative for Maritime Provinces. State trade covered and particulars as to salary, etc. Reply Box 112, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED — By Head Miller, with 20 years practical experience in modern Canadian mills up to 4,000 barrels capacity. Can guarantee best results as to quality and yield on both hard and soft wheat, and maintain mill at highest point of efficiency. At present in charge of a 1,000 barrel plant. Reply Box 85, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

PRACTICAL MILLER with 23 years experience seeks position with plant having daily capacity of 250 barrels or upwards. Can furnish excellent references. Reply Box 82, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—A 50-barrel Midget Marvel Mill, also complete installation of a flour milling plant. In use about three months. Machinery must be moved from actual premises. Good price for cash. Reply Box 103, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Head miller, with twenty years experience in 150 and 275 barrel mills, and still employed, is desirous of making a change. Applicant is 36 years of age, married, and can furnish excellent references. Reply Box 84, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

SALESMAN WANTED for the Province of Quebec. State requirements, experience and salary wanted. Reply Box 102, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

CYLINDER COCKLE MACHINE wanted. Must be in good condition and reasonable. Reply Mr. Charles Wyild, Ripley, Ont.

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THE PRACTICAL MILLER

WATER POWER FOR SALE.—One thousand horsepower on three leading Canadian railways and Great Lakes waterway. Less than 5 per h.p. per year. Elevator close. Town of five thousand population. Situated in Old Ontario. Reply Box 111, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

POSITION WANTED as head miller in a small or medium sized mill. Applicant has had twenty years' experience. Thirty-seven years of age. Reply Box 110, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FLOUR SALESMAN, speaking English, French and Spanish, seeks connection with milling concern. Reply Box 106, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—Sixty Barrel Stratford flour mill, Allis Rolls, Whitlaw Flour Sifter, Packer, Cockle Machine, etc., all in good running order. Full particulars and price on application to The Pearce Co'y, Ltd., Marmora, Ont.

WANTED TO EXCHANGE—A 20-inch McLachlan Chopper for a 15-inch Moore or Vessot, after April, or will buy. Reply F. H. Robinson, merchant miller, Cookstown, Ont.

FOR SALE—Two Centrifugal Reels, No. 1, one Centrifugal Reel, No. 3, one Hexagon Reel, No. 1. All in good order. Built by the Stratford Mill Building Co., Ltd. Reply Messrs. W. A. Stuart & Son, Box 88, Mitchell, Ont.

SALESMAN, with first-class knowledge of flour and feed trade in the Maritime Provinces is available for engagement. Results guaranteed. Excellent references. Reply Box 113, "Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—Flour mill properties, some operated by water power, others by gas engine and electric power. Write me before buying. Prices, $3,200 to $15,000. List your mills with me for sale. No listing charges and quick results if propositions will bear inspection. Apply E. Armbrust, Niagara Falls, South, Ont.

POSITION WANTED—Miller, thirty-seven years of age, is open to take charge of small or medium-sized mill, or to take position as second miller in large plant. Has had twenty years experience. Thoroughly familiar with all branches of milling. Can furnish excellent references. Reply Box 107, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

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THE PRACTICAL MILLER

The Question Box

With a view to making this department one of real service, "Canadian Milling & Grain Journal" cordially invites its readers to send in their problems to The Question Box. There are but very few millers or elevator operators who do not have worries in the proper conduct of their plants. It may be due to lack of experience or inability to trace cause and effect. The logical and sensible thing to do is to ask someone who may possibly know. Often he is not at hand, and still oftener the perplexed miller or elevator operator does not want to show his lack of knowledge. Under these circumstances he can address his inquiry to the craft through this journal. His name will not be divulged if he wishes to remain incognito. Someone is sure to reply who has had similar problems to meet or similar questions to ask. We guarantee to devote all the space necessary to the asking and answering of questions, so do not be backward in sending them in. THE EDITOR.

Ed. Note.—The following question and answer from a recent bulletin of the American Association of Operative Millers will doubtless prove of interest to practical millers in Canada.

QUESTION.—How much should wheat test going to first break roll to make the bran so it will not cake or sour during the time it is piled up. A.M.

ANSWER.—(By Major S. Howe, of the Southwest Milling Company, Kansas City, Kan.). The amount of moisture your wheat should test entering first break rolls depends largely on the amount of evaporation you have during milling process and that varies along with atmospheric changes; when humidity is high evaporation will be less than when low. Most mills use 15 per cent. moisture in wheat entering first break rolls and have an evaporation of (1½%) one and one-half per cent. during milling process. The bran as a rule shows less evaporation than other mill products, generally about (1%) one per cent.

The amount of evaporation and the proportion the finished products run to one another is a problem for each miller to figure out for himself. If you are using reasonably sound wheat, not packing bran too hot and tight in small bags and the moisture content of bran is favorable to the development of bac-cent. it should not cake or sour.

During the summer months some millers resort to the practice of using large bags (52-in.) fifty-two inches; and cooling and drying the bran some by blowing it into a large metal dust collector, generally located on top floor of mill some distance from bran duster and packer.

It is generally conceded that high moisture content of bran is favorable to the development of bacteria and moulds that are always present. High humidity and temperature is also favorable for the growth of bacteria and moulds; consequently all feed should be stored in a dry place, as low moisture of the bran, and storage in a cool dry place have been proven to be favorable factors in eliminating this trouble.

Standing bran on end is also recommended when storing as it relieves the pressure on bottom sacks and creates a circulation of air around and between which has a tendency to carry off any excess heat or moisture.

The Duster

The archbishop had preached a fine sermon on the beauties of married life. Two old Irish women coming out of church were heard commenting upon his address.

"'Tis a fine sermon his reverence would be after givin' us," said Bridget.

"It is indade," replied Maggie, "and I wish I knew as little about the matter as he does."

Anti-Tobacco Orator—"You go into a shop and buy a cigar, and in its wake you get wine, whisky and brandy—"

Voice—"Quick, where do you buy your cigars?"

Fashion Note.—The zenith in punctilio has been reached by a southern hotel. "Only gentlemen wearing belts are permitted to remove their coats."

TO-DAY'S BEST STORY

The Irate Father—I can see right through that chorus girl's intrigue, young man. The Lovesick Son—I know, dad, but they all dress like that nowadays.

"How far is to to Skeeterboro?" asked a motorist of a farmer he met on the roal. "Well, my friend," was the reply, "if you keep on going the way you're headed, it's about 25,000 miles, but if you turn around and go the other way it's about a mile and a half."

A rich man, lying on his death bed, called his chauffeur who had been in his service for years, and said:

"Ah, Sykes. I am going on a long and rugged journey, worse than ever you drove me."

"Well, sir," consoled the chauffeur, "there's one comfort. It's all down hill."

Rufus Redd Dogg

"I wuz sittin' in th' barn mendin' sum harness t'other afternoon," remarked Rufus to one of his cronies, Sid Granger, "when all't oncet th' ol' tabby, which wuz prowlin' roun' th' feed box med a dive f'r th' corner wher' er rat hed run lookin' f'r a hole." Tabby got down on 'r stomick t' spring an' I cud hear 'r say ez plain ez I kin see th' wart 'n Ol' Man Crowfoot's noze, 'I'm sure goin' t' hev you f'r supper, Mr. Rat.' "

"Ye hev a fat chanct," th' rat seemed t' say."

"Wait till ye see," sez th' cat an' she made a jump f'r the rat thet slid away and dissipeared."

"Th' ol' tabby sure looked mad, but," concluded Rufus, "sez I t' her; ye old whiskers, y'r like sum of them fellers agitatin' f'r a wheat board, ther too sure thet ther' goin' t' get what they ain't."

Vulcan Grain Elevator Machinery

HAS STOOD THE TEST

The VULCAN IRON WORKS, Limited

ESTABLISHED 1874

WINNIPEG

CANADA CEMENT
CONCRETE
FOR PERMANENCE

View of Peerless Cereal Mills Ltd. Woodstock, Ont.

CONCRETE

Keeps the grain dry—therefore

The Proper Material for Elevators

THE conservation of grain demands that it shall always be kept dry. One of the advantages of Concrete that its users first discovered was its wonderful waterproof quality—a quality which ensures the "dryness" of any article stored in a reinforced concrete structure. It is largely due to this that grain elevators of Concrete were erected in all parts of Canada; until to-day we have a series of these huge structures extending from the Western prairies which grow the golden grain, to the Eastern terminals where the grain is kept ready for export.

There are other features of Concrete almost equally important to the grain business. It is fireproof, and rat proof. Moreover, it readily adapts itself to the various types of tank and elevator most suited to the local conditions—is readily moulded to the shape and proportion its designer desires for the particular purpose for which the structure is intended.

SPECIFY
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Uniformly Reliable

Our Service Department is anxious to co-operate in all lines of work for which concrete is adapted. Our library is at your disposal at all times without charge.

CANADA CEMENT COMPANY LIMITED

Canada Cement Company Building Phillips Square Montreal

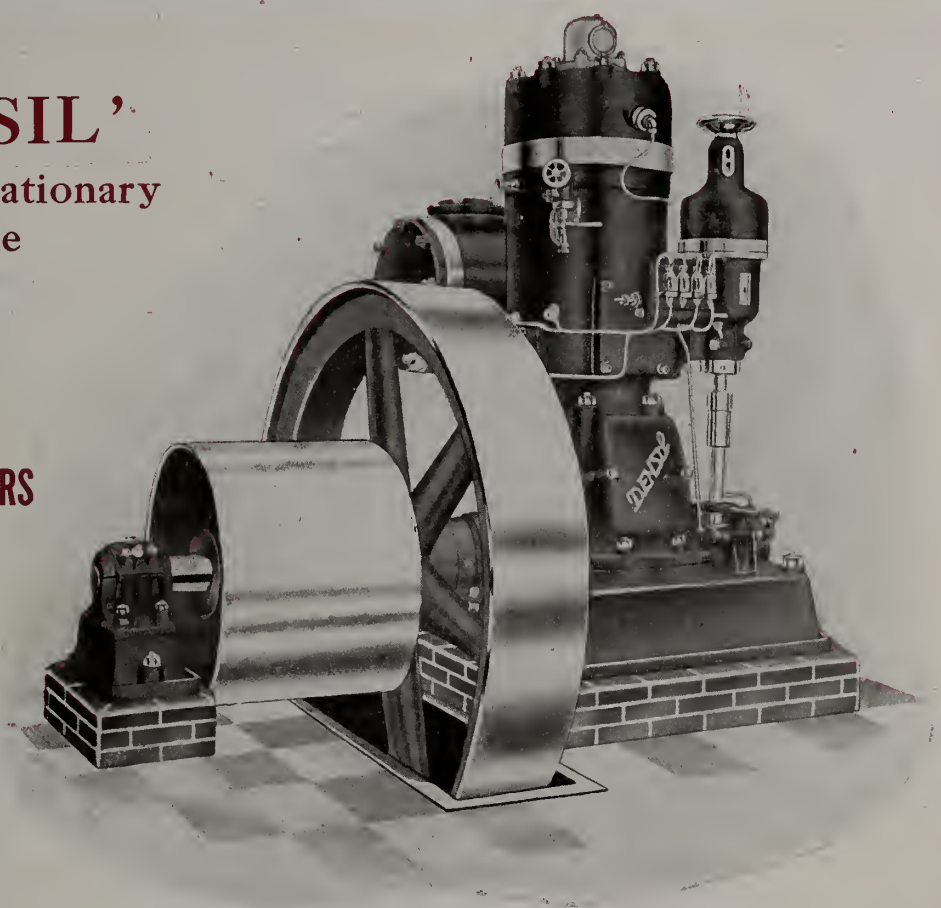
Sales Offices at : MONTREAL TORONTO WINNIPEG CALGARY

CANADIAN
Milling & Grain
JOURNAL

VOL. III MONTREAL, JUNE 15th, 1922 No. 10

THE YELLOW BOOK

THE
'DENSIL'
Crude Oil Stationary
Engine
for
MILLS
&
ELEVATORS



Single Cylinder Densil Stationary Engine with Belt Pulley

DENSIL CRUDE OIL ENGINES are selling because they are cheaper to buy, install and operate than steam—simpler, more economical and safer than gasoline engines.

See article on Oil Engines page 29

CRUDE OIL ENGINE COMPANY OF CANADA

14 Place Royale MONTREAL

Responsible Agents Wanted

LAKE OF THE WOODS MILLING CO., LIMITED,

MAKERS OF

MANITOBA SPRING WHEAT FLOUR

GUARANTEED

NOT BLEACHED *NOT BLENDED*

MILLS AT KEEWATIN, PORTAGE LA PRAIRIE, MEDICINE HAT

CAPACITY 13,700 BARRELS DAILY

HEAD OFFICE, MONTREAL WESTERN OFFICE, WINNIPEG

LOCAL OFFICES:—
TORONTO, OTTAWA, LONDON, ST. JOHN, FORT WILLIAM, CALGARY, EDMONTON, VANCOUVER

CABLE ADDRESS:—"HASTINGS," MONTREAL. CODES:—A. B. C. 4th & 5th EDITIONS, 1901, RIVERSIDE

112 RECEIVING ELEVATORS IN MANITOBA, SASKATCHEWAN AND ALBERTA, CAPACITY 3,500,000 BUSHELS.
TERMINAL ELEVATORS AT MILLS, CAPACITY 1,500,000 BUSHELS

PRESIDENT
FRANK S. MEIGHEN

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DIRECTORS

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ABNER KINGMAN
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JOHN W. CARSON
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TANCREDE BIENVENU

CANADA CEMENT
CONCRETE
FOR PERMANENCE

Protection Against Fire and Vermin— Impervious to Damp

Concrete is equally desirable for the huge terminal structure and the small "line" elevator.

Realizing the importance of proper storage facilities, many large grain growers now ship their grain to a large elevator as soon as reaped—whereas, if they would build small Concrete elevators for themselves, they could themselves store the grain, and thereby take advantage of price advances that occur after the crop is in.

The durability—and consequent economy—of Concrete recommend it for almost any kind of structure; but its advantages are especially apparent for buildings in which grain is to be stored.

There are three great dangers that menace stored grain—all three of which will conquer most materials, but which meet their match in Concrete. These are Fire, Rats, Dampness.

To render the grain impervious to damp, to protect it against vermin, to safeguard it from fire—Concrete elevators are almost universally used.

Concrete Grain Dryer of the Midland Elevator Co., Midland, Ont. Built by McFarlane Pratt Hanley Ltd., Contractors.

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We maintain a Service Department to co-operate in all lines of work for which Concrete is adapted. Our library is comprehensive and is at your disposal at all times without charge.

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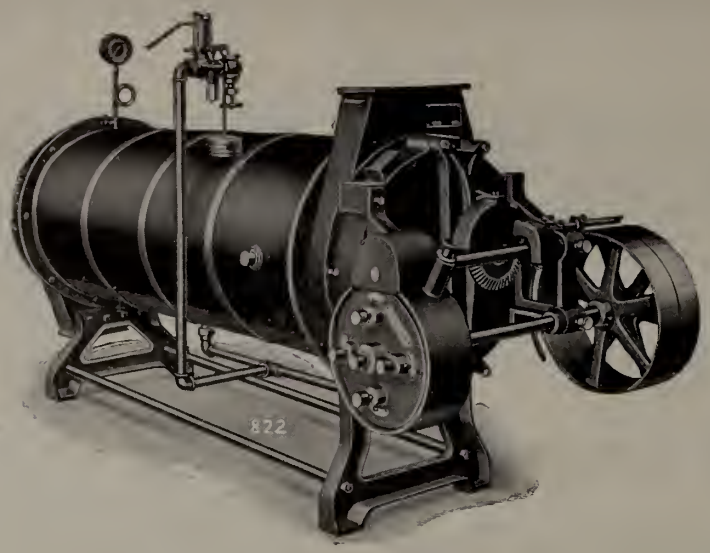
Sales Offices at:— MONTREAL TORONTO WINNIPEG CALGARY



A New Monitor

The MONITOR Horizontal Wheat Conditioner has been in the family for quite some time, working privately in a couple of mills, to demonstrate in every-day use its right to be a permanent MONITOR.

IT HAS MADE GOOD. Yes, it's a horizontal type planned that way to give control of conditioning time.

The wheat is sent through in tubes, surrounded by steam. It does not matter how many tubes you use—each tube is a conditioner of itself and the results are the same on the quantity passing through, be it quarter, half or full capacity. Its speed through the tubes is controlled by four speed changes, each as easily controlled and handled by the operator as the gear-shifts on your automobile.

We want to tell you all about it but we lack space here. However, even though you do not contemplate the immediate installation of a conditioning and tempering plant or the overhauling of your present system, send for printed matter on this machine.

Keep informed of "progress in milling." This machine represents "real" progress. Know all about every part of your business.

The Monitor
REGISTERED TRADE-MARK

Huntley Mfg. Co. Limited

Special Agents for the Northwest
KIPP-KELLY, Ltd.
WINNIPEG - - MAN.

TILLSONBURG, ONTARIO, Canada

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JUTE AND COTTON BAGS, HESSIANS BURLAPS, BUCKRAMS, PADDINGS, TWINES, ETC.

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The Reason Why!

Morse Silent Chain Drives

Operate in practically all Grain Elevators and Flour Mills in Canada is because of their Frictionless Rocker Joints. Oil Baths not necessary.

Immediate deliveries.

Write for Catalogue.

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ROBIN HOOD MILLS LIMITED

ROBIN HOOD
TRADE MARK

MILLERS OF

High Grade Western Canadian

SPRING WHEAT FLOUR

MILLS AND WESTERN OFFICES AT

MOOSE JAW, SASK.
CALGARY, ALBERTA

COMBINED DAILY CAPACITY

5,000 BARRELS FLOUR
1,500 BARRELS OATMEAL AND ROLLED OATS

HIGHEST QUALITY

ROLLED OATS AND OATMEAL

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Specializes in High-Grade Transmission, Elevator and Conveyor Belts

for all purposes

We have one of the largest Belt Presses in Canada, and can handle orders for all required sizes, lengths and widths.

DUNLOP TIRE & RUBBER GOODS CO., LIMITED

Head Office and Factories: TORONTO Branches in the Leading Cities

Also Makers of High-Grade Conveyor and Elevator Belts, Packing, Hose, etc.

The St. Lawrence Flour Mills Co.

LIMITED

CANADA'S MOST MODERN AND BEST EQUIPPED MILLS

MAKERS OF CANADA'S MOST POPULAR BRANDS OF FLOUR

Regal

A high quality bread flour sold in bags of 7, 14, 24, 49 and 98 lbs. and in barrels of 98 and 196 lbs.

Quotations on car lots requested.

Fleur de Lis

A high grade bread flour sold in 98 lbs. bags and in 98 and 196 lbs. barrels.

The baker's favorite from Coast to Coast.

Offices & Warehouses: 1110 NOTRE DAME STREET WEST, MONTREAL, CANADA

BY SPECIAL APPOINTMENT
TO HIS MAJESTY THE KING

THE OGILVIE FLOUR MILLS CO.

LIMITED

HEAD OFFICE: MONTREAL, CANADA

THE Company which has made Canadian Flour renowned throughout the world with its most famous brands —

ROYAL HOUSEHOLD

and

GLENORA

which are everywhere acknowledged to be

CANADA'S BEST

— MADE BY —

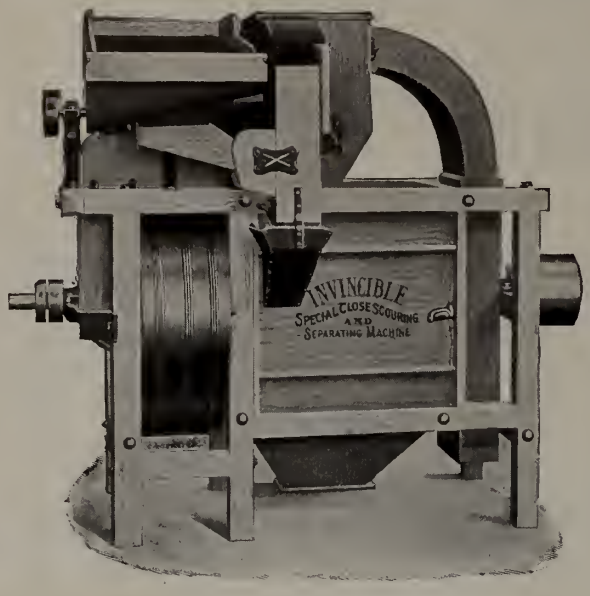
The Largest Millers In The British Empire

FORT WILLIAM MILLS

Mills at : MONTREAL, FORT WILLIAM, WINNIPEG, MEDICINE HAT

Daily Capacity, 22,250 Barrels

There is no difference between Indifference and Neglect



If you are indifferent about the way your grain is cleaned, you are neglecting the most important operation in your mill.

Good Grain Well Cleaned—
What's the Answer?

No matter how many scourers you now have and use, scour your wheat on an INVINCIBLE after tempering. All up to date millers temper their wheat.

An INVINCIBLE gets all the dirt the others leave.

The Invincible Grain Cleaner Company

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Representatives: { **Strong-Scott Mfg. Company, Limited, Winnipeg, Man.**
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Established 1854 **Cable Address: HUNTMILL**

Capacity 1200 barrels daily

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Hunt's Flour "Becomes a Habit"

YOUR SUBSCRIPTION WILL HELP MAKE CANADIAN MILLING & GRAIN JOURNAL AN EFFICIENT FACTOR IN YOUR INDUSTRY.

THIS JOURNAL IS PUBLISHED TO BENEFIT THE MAN WHOSE CAPITAL IS INVESTED IN MILLING OR GRAIN HANDLING. SEND US YOUR NAME AND ADDRESS WITH $3.00 AND GET THE JOURNAL FOR A YEAR.

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WINNIPEG MILL

Daily capacity 10,000 bbls. Flour.
" " 1,000 bbls. Rolled Oats.

100 Interior Elevators Throughout Canada's Famous Wheat Belt

WITH A

MOORE GRINDER

YOU GET

MORE ECONOMY

Made in 11 inch and 15 inch

A feature with this Grinder is ——————
the Running Heads cannot get out of tram, which insures uniform grinding; no loss of time and no loss of power.

MILLERS, ELEVATOR OWNERS, CHOPPING MILLS, ETC. should ask for more particulars. We can assure you we have a GRINDER you will want.

Send us your REPAIRS, GRINDING, CORRUGATING. Our work is promptly and carefully done.

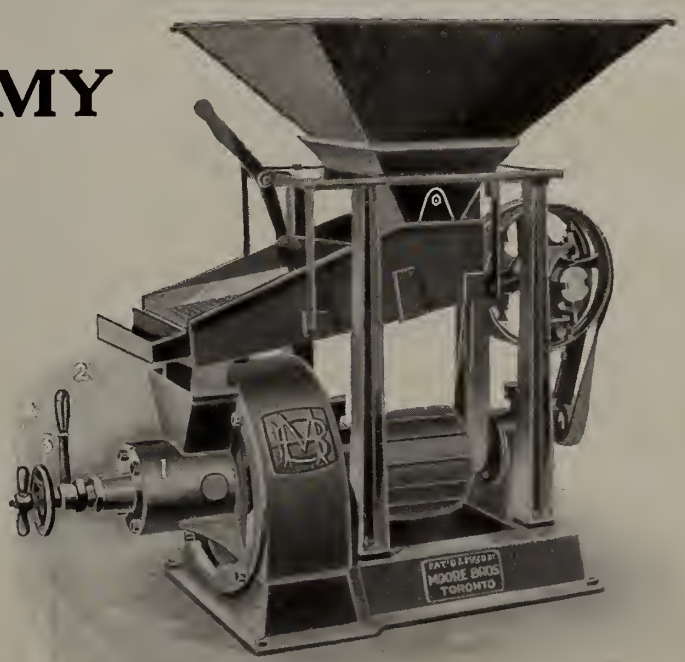
Various Makes of Refitted Grinders Always in Stock

MOORE BROS.

Manufacturing Machinists
Power, Transmission & Supplies

61 to 65 Nelson St. - TORONTO

Little Power to Operate



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Renold Chain Drives operating Grinders

Are Ideal FOR Grain Elevators AND Flour Mills

Installations made in Canada seven to ten years ago are still in service WITHOUT HAVING COST A CENT FOR MAINTENANCE OR REPAIRS.

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IMMEDIATE DELIVERIES from CANADIAN STOCKS.

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LINCOLN PAPER MILLS CO.

LIMITED

ALL ROPE FLOUR SACKS
CREAM, WHITE COATED
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MILLS AT

MERRITTON, ONT.

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Samples and prices submitted on request.

TO REDUCE CONSTRUCTION AND MAINTENANCE COST

— use —

Pedlar's Corrugated Iron Siding

If you are contemplating any reinforced concrete construction it will pay you to investigate Pedlar's "Perfect" Steelcrete, the ideal expended metal reinforcing. Write for our complete Reference Catalog illustrating our full range of "Perfect" Sheet Metal Products for modern fireproof construction.

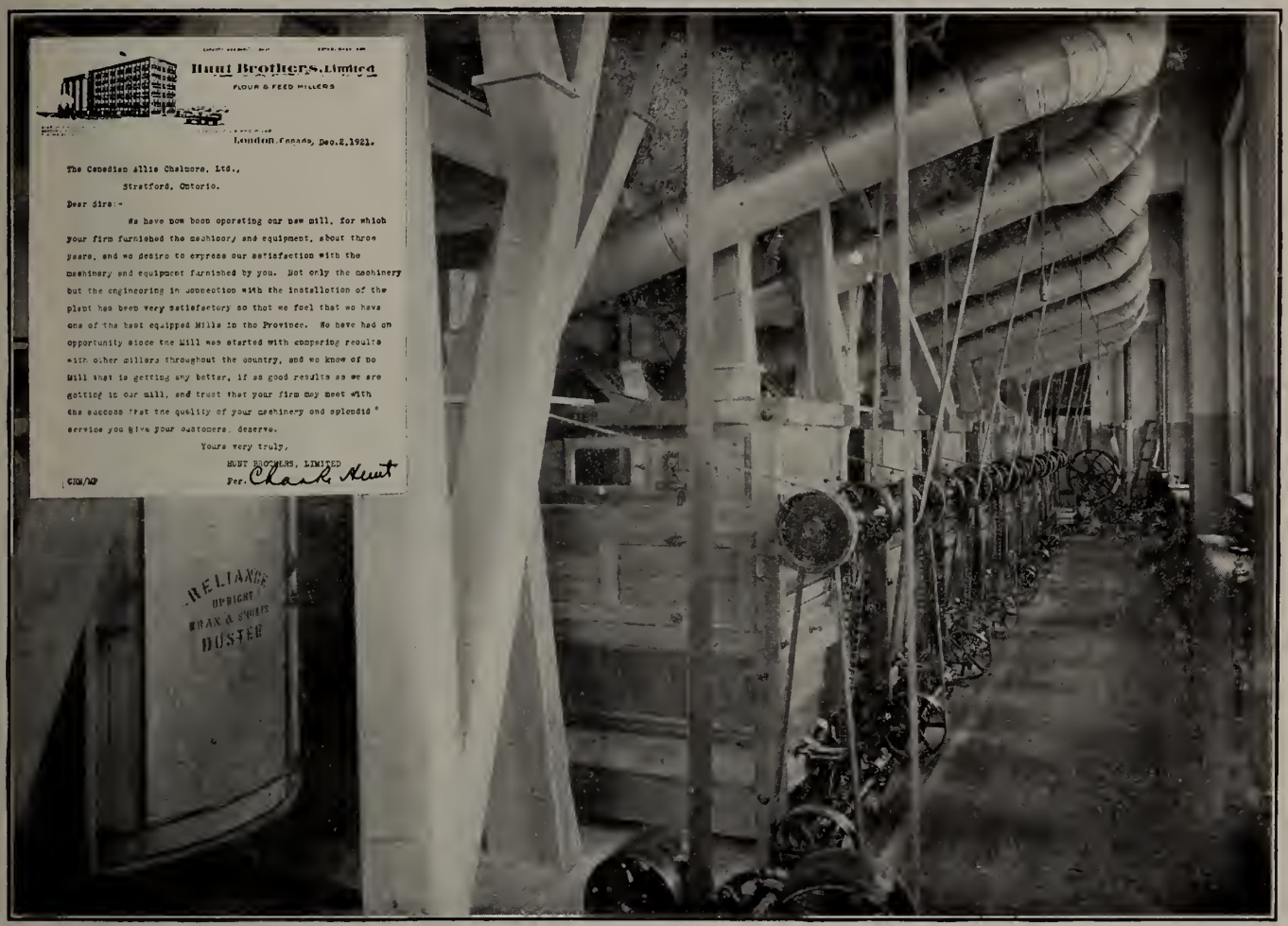
The Pedlar People Limited

(Established 1861)

Executive Office and Factories:—OSHAWA, Ont.

Branches:—Montreal, Quebec, Halifax, St. John, Ottawa, Toronto, Winnipeg, Calgary, Vancouver.

Read Hunt Bros. letter regarding their Mill after three years continuous operation.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FLOUR & FEED MILLERS
London, Canada, Dec. 2, 1921.
The Canadian Allis Chalmers, Ltd.,
Stratford, Ontario.
Dear Sirs:-
We have now been operating our new mill, for which your firm furnished the machinery and equipment, about three years, and we desire to express our satisfaction with the machinery and equipment furnished by you. Not only the machinery but the engineering in connection with the installation of the plant has been very satisfactory so that we feel that we have one of the best equipped Mills in the Province. We have had an opportunity since the Mill was started with comparing results with other millers throughout the country, and we know of no Mill that is getting any better, if as good results as we are getting in our mill, and trust that your firm may meet with the success that the quality of your machinery and splendid service you give your customers, deserve.
Yours very truly,
HUNT BROTHERS, LIMITED
Per. Chas. Hunt
CHH/MP
RELIANCE
UPRIGHT
BRAN & SHORTS
DUSTER

PURIFIER FLOOR IN HUNT BROS.' 1,200 BBL. MILL AT LONDON, ONT.

MAY WE HAVE THE PLEASURE OF INFORMING YOU OF THE SUCCESS THAT OTHER MILLERS ARE HAVING WITH OUR :: :: EQUIPMENT :: ::

CANADIAN ALLIS-CHALMERS LIMITED

STRATFORD, ONTARIO

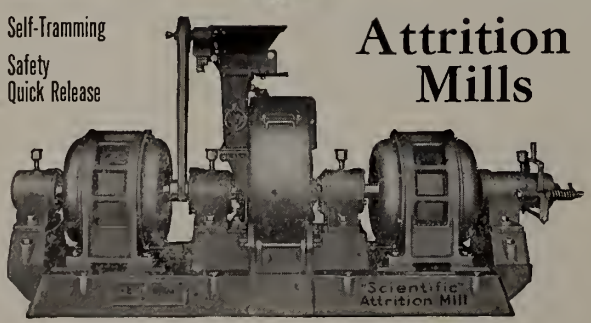
The Strong-Scott Mfg. Co., Limited, Winnipeg, Man.
WESTERN REPRESENTATIVES

The Bauer
COSTS LESS PER HOUR

Belt or Motor Driven
Self-Tramming
Safety Quick Release

Ball-Bearing

Attrition Mills



The Bauer Ball-Bearing Motor-Driven Attrition Mill

Actual Records Prove that Bauer Ball-Bearing Attrition Mills do Better Work and More of it at a Less Cost per Hour

Send for List of Canadian Users.

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ESTABLISHED 1878
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The B.O.D. get the Annual Report

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CYLINDER OILS

Imperial Cylinder Oil
Imperial Valve Oil
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FOR VARIOUS INDUSTRIAL USES

Imperial Black Oils
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Imperial Tempering Oils
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Imperial Greases.

The Board of Directors don't usually realize how much ***correct*** lubrication with Imperial Lubricants means to the business until they see it in "black and white" on the annual report.

Power-saving economy, increased efficiency and more profitable plant operation follow standardization on Imperial Lubricants. The complete Imperial line includes a right grade of oil and grease for every mechanical unit in industrial service. The name "Imperial" guarantees the high quality of every grade.

Expert Imperial Lubrication Engineers are quickly available when you require their service. Write to 56 Church St., Toronto.

IMPERIAL OIL LIMITED

Canadian Company—Canadian Capital—Canadian Workmen

Branches in all Cities

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Is going to be a bumper year for Canada's Milling and Grain Handling Industries

Don't you want to get in line early for your share of this trade?

You will probably get some but you will certainly get more if you advertise in

CANADIAN MILLING & GRAIN JOURNAL

Rates on application.

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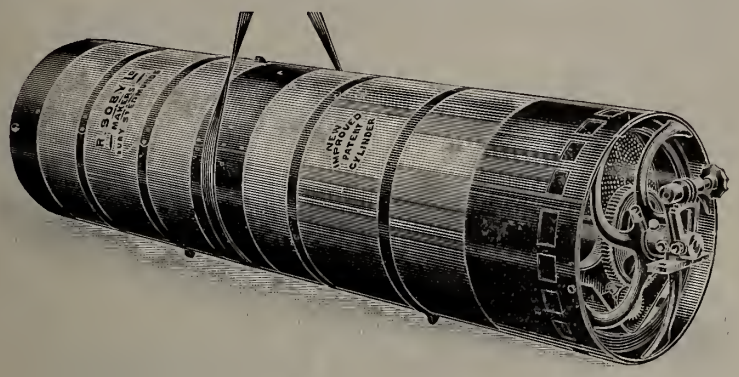


BOBY'S PATENT COCKLE and BARLEY CYLINDERS

British Manufacture

Used throughout the world in Flour Mills and Seed Warehouses. We make all sizes of Cylinders and drill all sizes of Indents. Especially efficient for cleaning Clover and Grass Seed, etc.

We supply complete Cylinders, or Plates only, or New Covers for Old Cylinders; also Single Cylinders, or in batteries of any number and with or without frames.

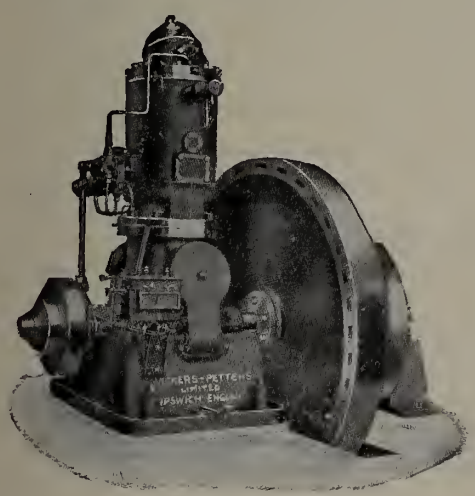
R. S. GRIFFITH

Canadian Representative **225 Beaver Hall Hill, MONTREAL**

KIPP-KELLY LIMITED, Winnipeg, Man. - - Agents for Northwest

Vickers-Petter Oil Engines

(PETTERS' PATENTS.)



Let us show you how to cut your power costs by using

THE WORLD'S BEST CRUDE OIL ENGINE

The cheapest and most reliable power for Mills and Elevators

SIZES UP TO 500 B.H.P.

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FIRM PRICES—PROMPT DELIVERY

Manufactured by
VICKERS-PETTERS LIMITED
IPSWICH, ENGLAND

For full particulars apply

R. S. GRIFFITH

CANADIAN REPRESENTATIVE

225 BEAVER HALL HILL, MONTREAL

Maximum Power Transmission Do You Want It?

Then Try Out

"P.M.S." Belting

This remarkable belting gives maximum transmission because it has been especially designed to do so. It has turned the belting world upside down because it has successfully accomplished the solution of an age-old problem. This problem of efficiently transmitting power that is very costly to develop comes very close home to every engineering man in every industry. "P.M.S." very likely solves the problem of some difficult drive of yours. We ask you in your own interest to examine some "P.M.S." Belting. Observe that it excels in freedom from slipping, stretching, breaking and time lost for repairs and adjustments. It has marvellous strength and stands up to heat or cold and wet or dry conditions. It is made from toughest Cotton Fabric covered with a tough layer of rubber to prevent slipping.

What about YOUR needs for Belting?

"P.M.S." Is Manufactured Exclusively by

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Head Offices and Factories - TORONTO

Branches in all principal Cities of Canada

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Milling & Grain
JOURNAL

Montreal:
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Published on the 1st and 15th of each month.
Devoted to Milling, Grain and Allied Interests.

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VOL. III MONTREAL, JUNE 15TH, 1922. No 10

CANADA'S ONLY MILLING AND GRAIN PAPER

A Good Use for Some of the Money

IN the House of Commons recently during an interlude in the budget debate the members were regaled with the reading of an imposing array of figures reflecting on the financial operations of the late Wheat Board. Among other things it was shown that a total of $560,000 had been turned over to the Federal authorities by the Canada Wheat Board from surplus account, together with $175,000 representing the value of unclaimed participation certificates.

The $175,000 against which there are participation certificates outstanding must, of course, be held until those to whom it belongs have had ample opportunity and time to prefer their claims, but it is rather interesting to learn that the Wheat Board in turning over the $560,000 from surplus account recommended that same be distributed to the provincial governments pro rata on the basis of the quantity of wheat delivered to the board by the producers in each province, such monies to be used first, to relieve distress among the farming community and secondly to inaugurate research work particularly for the prevention of black rust in wheat.

If it is not too late, however, "Canadian Milling & Grain Journal" suggests that a portion of the money be used to furnish mechanical flour handling equipment at the principal Canadian seaboard points in order that the milling industry may have an opportunity of successfully meeting foreign competition and recovering some of the valuable export trade which the operation of the Wheat Board which was able to accumulate a surplus of $560,000 lost to them.

When You Want Something

Whatever you may require in the way of new machinery, equipment, or mill or elevator supplies you will find someone to furnish you in the best and most improved manner in the advertising pages of "Canadian Milling & Grain Journal." The old adage, "A Stitch in Time saves Nine," applies as surely to the miller and elevator man as to any one engaged in any other line of endeavor. Twenty-five dollars' worth of repairs now may save you five hundred dollars' worth later on, while, as for the contemplated addition of new machinery or the extension of the existing plant, there is no time like the present.

The Question of Millers' Salaries

THE subject of millers' salaries continues to come to the surface very frequently. It is a question which will always be a very live one due to the fact that without a reasonable salary no miller, if he be competent, can be satisfied, or will be satisfied. On the other hand if the employee does not earn his salary or does not earn a good salary all due to his own fault, or does not earn a better salary than he is getting he has no right to expect more, to ask for more. First, the employer must provide the means, the well-equipped mill and the kind of grain that will produce the goods. Then the working conditions must be at least reasonably good, and the help supplied of such caliber that the miller can depend on it. This done, the employer can ask and demand results and he should not be asked to raise salaries and improve working conditions unless he is getting results. When the results are all that can be asked and the men who are responsible for the results do not get reasonable pay the employer should go hide himself. He should be ashamed to look an honest man in the face. In a case where the miller was compelled to do two men's work, and all manner of dirty work at pay considerably less than common labor was getting and then to have the employer pay out as much money in one bunch in excess profit tax as his head miller's salary would have amounted to in two years, leaves nothing to say but—it served him right. Did this miller earn a better salary than he was getting? There would have been no excess profit tax had the miller not been of the kind that knows how to run a mill. The employer who is not willing to pay a reasonable wage where reasonable wages are due, should not be in business.

The Principles of Marketing

In any rational system of marketing, whether it be wheat or any other staple commodity, the market will always ask the producer at least three questions: (1) What have you to sell? This question includes the kind, quantity, and quality of the product. (2) How much of it can you furnish? This involves the size of the supply and the matter of its continuity; it seeks to ascertain whether the producer will have just one lot of a product or whether he can be depended upon to have a similar lot or a better one next month, or next year, or at some other definite time. (3) How much must you be paid for it? In other words, do you produce at a cost low enough, in relation to the value of other commodities, to make it possible for the market to

absorb your product and pass it on to the consumer, who is always ready to reduce his consumption or to use substitutes if your stuff is too high-priced in relation to other products?

The success of any marketing system must ultimately depend in a large measure on the producer's answers to these questions. It is important to remember that the producer must answer, and that his answer must be expressed chiefly through his enterprises of production.

A discussion of economic mania should, and usually does, make some mention of one of its most common manifestations: the tendency to look to the government for relief from economic ills. This tendency has two major causes: one is the common belief that the government is something outside ourselves; something separate and apart which draws support from source in which we are in no way interested. Many people would not think of raiding their neighbor's henroost, but they do not hesitate to support a raid on the public treasury.

A government succeeds not by giving things to its citizens but by allowing them to achieve success themselves. It sometimes is necessary for a government to see that different groups of its citizens do not prey on one another; to see that they play fair, just as playground supervisors must see that disorderly children do not interfere with well-behaved youngsters in their charge.

Increase Your Mill's Profits

THERE are many things that enter into the problem of making the small flour mill pay but there is none perhaps more important than the relationship existing between employer and employees. No matter how good the mill's equipment may be, no matter how excellent the quality of wheat being handled, the business will not pay nor can it be made to pay unless all work in perfect harmony and each and every one does his duty to the best of his ability.

A condition of affairs in which employer and employees are at variance cannot last, for, while one is doing, the other is undoing. This is wasted energy and time, both of which are expensive and both of which cut at the very foundations of successful milling which embodies the ability of all concerned to keep expenses direct and indirect down to rock-bottom. At the same time the really efficient practical miller will not practice false economy for one often has to throw away a few dollars to bring in more dollars in return. For example, it is false economy of the worst kind to incur expense in fixing up machines or equipment which have had their day and are only ready for the scrap heap.

To revert to the desirability of harmony between employer and employee. Nothing tends to maintain agreeable relations between all concerned in the small mill particularly so well as the knowledge that each worker is regarded as being essential to the success of the whole undertaking.

It pays to pay a good salary to a very competent man to run the mill, then put it up to him to deliver the goods; the owner in turn doing his part by giving him a good, correct mill, and good wheat from which to produce those goods.

GOSH ALL HEMLOCK!

Said the little red rooster, "Gosh all hemlock!
Things are tough,
Seems that worms are getting scarcer, and I
cannot find enough
What's become of all those fat ones is a mys-
tery to me;
There were thousands through that rainy spell
—but now where can they be?"

The old black hen who heard him didn't
grumble or complain,
She had gone through lots of dry spells, she
had lived through floods of rain.
So she flew up on the grindstone, and she
gave her claws a whet,
As she said, "I've never seen the time when
there weren't worms to get."

She picked a new and undug spot; the earth
was hard and firm,
The little rooster jeered, "New ground! That's
no place for a worm."
The old black hen just spread her feet, she
dug both fast and free,
"I must go to the worms," she said, "The
worms won't come to me."

The rooster vainly spent the day, through
habit, by the ways
Where fat round worms had passed in squads
back in the rainy days.
When nightfall found him supperless, he
growled in accents rough,
"I'm hungry as a fowl can be. Conditions
sure are tough."

He turned then to the old black hen and said,
"It's worse with you,
For you're not only hungry but you must be
tired too.
I rested while I watched for worms, so I feel
fairly perk;
But how are you? Without worms too? And
after all that work."

The old black hen hopped to her perch and
dropped her eyes in sleep,
And murmured in a drowsy tone, "Young
man, hear this and weep:
I'm full of worms and happy, for I've dined
both long and well.
The worms are there as always—but I had to
dig like Hell."

Oh, here and there red roosters still are hold-
ing sales positions.
They cannot do much business now because
of poor conditions.
But soon as things get right again they'll
sell a hundred firms—
Meanwhile the old black hens are out and
gobbling up the worms.

And so it goes, when times are bad, the croker
in a maze is.
"Why should a body work," he cries, "with
business gone to blazes";
But whether times be good or bad the wise
man goes a-bustlin'
And "Canadian Milling & Grain Journal" can
help him in his hustlin'.

EASTERN PROVINCES

MONTREAL

Dubrule Building
Phillips Square

Tel. Plateau 1983

MONTREAL JUNE 15TH, 1922

THE MONTREAL MARKETS

Flour—The continued weakness of the wheat market resulted recently in a general decline of 50 cents per barrel for all grades of spring wheat flour. Prevailing quotations are: first patents $8, second patents $7.50, and strong bakers $7.30 per barrel, in jute bags, ex-track, less 10 cents per barrel for spot cash. That further price cutting is in view is regarded as inevitable. The demand from all sources for supplies of spring wheat flour shows but little improvement and the volume of business has been generally small.

Winter wheat flour prices have also undergone a change since last report, choice grades having dropped from $7.15 per barrel in second hand bags, ex-track, to $6.75, while broken lots are selling at $7 per barrel, ex-store. Winter wheat patents are quoted at $7.50 to $7.75 per barrel, ex-store, in new cotton bags. The trade in white corn flour continues slow at $5 to $5.10 per barrel, in jute bags, delivered to the trade.

Grain.—A reduction of 6d per quarter for June shipment to 2s per quarter for heavy grain and to 1s. 9d. per quarter for oats to Liverpool, London, and Glasgow, was a recent feature of the local grain markets. There has been no change in rates to British ports other than those mentioned.

The foreign demand for grain at Montreal has been improving somewhat of late and notwithstanding the fact that prices bid were lower than those asked local importers anticipating a weakness which actually materialized in the Winnipeg market were able to close some satisfactory orders.

There has been but little change in cash grain market prices and the demand for supplies is slow. Car lots of No. 2 Canadian western oats are quoted at this writing at 65½c to 66c, No. 3 C.W. and extra No. 1 feed at 62c to 62½c; No. 1 feed at 61c to 61½c, and No. 2 feed at 59c to 59½c per bushel ex-store, while odd cars of American No. yellow corn sold at 72c to 72½c, and No. 2 mixed corn at 71c to 71½c per bushel ex-store in Canadian funds.

Millfeed.—There has been no change in the condition of the market for millfeed, business being dull and prices irregular with millers quoting Manitoba bran in car lots at $28.25; shorts at $30.25, and middlings at $32.25 per ton, including bags, ex-track, less 25c per ton for spot cash, but on the other hand it is reported that outside dealers have made sales of car lots of bran at $25 and shorts at $26.50 per ton, including bags, ex-track. Pure barley meal is unchanged at $38 to $40; pure grain moullie at $38, and feed corn-meal at $34 per ton, including bags, delivered to the trade. The market for standard grades of rolled oats is dull and prices are nominally unchanged at $3.20 to $3.25 per bag of 90 lbs.

Baled Hay.—A fair amount of business continues to be done in baled hay for local account, but as supplies are liberal the tone of the market continues easy. Lower prices are expected in the near future. Sales of car lots of good No. 2 timothy are being made at $27 to $28; No. 3 timothy at $25 to $26, and clover and clover mixed hay at $21 to $22 per ton, ex-track.

WHAT MONTREAL AND OTHER CANADIAN PORTS NEED

Some of the mechanical flour handling equipment which is doing good work at Norfolk, Va.

When you have made your first booze on the kitchen range, just pour a little of it on the sink. If it takes the enamel off, pour it all in the sink."

QUEBEC HARBOR CHARGES ABOLISHED IN EFFORT TO SECURE MORE BUSINESS

Quebec.—The Quebec Harbor Commissioners have abolished the seven cents per net ton register on steamers loading full grain cargoes at Quebec. They have also agreed to waive the moorage charges of 60 cents per 100 tons register. The above charges have been levied at Quebec for more than 30 years, and were most vexing to owners.

"To place Quebec on better footing than competitive St. Lawrence ports," says the Quebec Harbor Commission in its announcement regarding the new departure, "we have decided to waive tonnage dues seven cents net register ton, also side moorage sixty cents hundred tons net register on steamers loading full grain cargoes, Quebec. Steamers should save about two days steaming plus pilotage, about two hundred dollars stopping Quebec instead proceeding up channel. Kindly give this greatest publicity possible. Might advise Baltic and London corn exchange also, as many owners and interested parties quickly. Can run grain Quebec sixty thousand bushels per hour, abundant water, loading berths up to thirty-three feet. Our opinion steamers could accept three pence quarter less at Quebec than other ports. There is half-cent bushel more rail freight in Quebec than Montreal, but time and money saved more than offsets this. Loading can be done as cheaply as at Montreal, and shifting boards and bags are cheaper here."

LACHINE CANAL GRAIN SHIPMENTS

Montreal.—A general increase is shown in shipments of grain down the Lachine Canal during the month of May as compared with shipments during the same month of last year. There is a total increase of 2,746,133 bushels of grain, this May's total being 13,917,076, as against 11,170,943 bushels in May, 1921. All grains show an appreciable increase except oats, which register a decrease of 1,339,305 bushels, the last month's shipments being 1,966,561, as against 3,305,866 bushels. Had there been no decrease in oats, the total increase over May, 1921, would have been 4,085,438 bushels.

The heaviest increase is in wheat, May, 1922, recording shipments of 4,997,331, as against 2,991,764 bushels, an increase of 2,005,567 bushels. Other increases are 4,875,425 bushels of corn, an increase of 904,351 bushels; 916,213 bushels of barley, an increase of 345,036; 1,075,185 bushels of rye, an increase of 798,694; and 86,361 bushels of flax, an increase of 31,790. There were also 31,500 sacks of flow, there being no flour shipped through in sacks in May, 1921.

MORE TAX EXEMPT PRODUCTS

Montreal.—According to advices recently received from Ottawa the following mill products are added to the list of commodities exempt from the new budget tax: Rolled wheat, buckwheat meal, pea meal, alfalfa meal.

The 50% increase in the sales tax works out as follows:

On domestic products:—From manufacturer to wholesaler, 2¼ per cent.; from wholesaler to retailer, 2¼ per cent.; from manufacturer to retailer or consumer, 4½ per cent.

On imported articles:—From manufacturer to wholesaler, 3¾ per cent.; from wholesaler to retailer, 2¼ per cent.; from manufacturer to retailer or consumer 6 per cent.

The drawback regulation with regard to bags, etc., used for export are still in effect.

These amendments are effective as at May 24th, 1922.

WILL WANT SEED CLEANING EQUIPMENT

Winnipeg.—Farmers of the Birtle, Man., district have formed a co-operative seed growing centre for the sale of seed grain in carload lots. Farmers of the Birtle district have been winning honors at provincial and international seed grain fairs for many years. Cleaning machinery will be installed, the grain standardized and sold for seed purposes in Minnesota and the Dakotas, where Manitoba seed is particularly in demand, especially Marquis wheat and white oats. The latter are very popular on account of their plumpness and because they retain their vigor for three years.

THE CHICAGO MARKETS

The following table compiled from figures furnished by Messrs. Logan & Bryan, members of the Winnipeg Grain Exchange and the Chicago Board of Trade, C.P.R. Telegraph Chambers, Montreal, show highest price levels recorded on Chicago Board of Trade from May 29, 1922, to June 10, 1922, inclusive.

	May 29	May 30	May 31	June 1	June 2	June 3	June 5	June 6	June 7	June 8	June 9	June 10
May Wheat	1.29	Decoration Day—Board of Trade closed	1.19½	..	..	..	..	..	..	..	..	..
June Wheat	1.26		1.19	1.19	1.19⅛	1.17¾	..	..	..	..	..	..
July Wheat	1.23⅞		1.18¾	1.19¾	1.19¾	1.18	1.14¼	1.13¾	1.14¼	1.14⅞	1.14¾	1.15⅝
September Wheat	1.19⅞		1.17½	1.18¼	1.18⅝	1.17¼	1.14½	1.14⅞	1.14	1.14½	1.15¼	1.15
May Corn	0.61		0.60⅜	..	..	..	..	..	..	..	..	..
July Corn	0.63⅛		0.62⅜	0.62¾	0.62⅜	0.61⅞	0.60⅝	0.61⅛	0.61	0.61¼	0.63¼	0.62⅜
September Corn	0.65⅞		0.65¼	0.65⅝	0.65½	0.64¾	0.63½	0.64⅛	0.64	0.64⅜	0.66⅛	0.65⅝
May Oats	0.37⅛		0.36½	..	..	..	..	..	..	..	..	..
July Oats	0.38½		0.38⅜	0.38¾	0.38⅜	0.38¼	0.37⅛	0.37⅛	0.36¾	0.36⅞	0.37	0.36½
September Oats	0.40¼		0.40¼	0.40½	0.40¼	0.40⅛	0.39	0.39	0.38⅞	0.39	0.39	0.38⅝
May Rye	1.00¾		0.97¾	..	..	..	..	..	..	..	..	..
July Rye	1.01¾		0.99¼	0.99½	1.00½	0.99½	0.95½	0.93¼	0.93	0.92	0.92	0.91
May Barley	0.65		0.65	..	..	..	..	..	..	..	..	..
July Barley	0.65		0.65	0.65	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64

ONTARIO
TORONTO

TORONTO JUNE 15TH, 1922

THE TORONTO MARKETS

Flour.—The export trade in flour continues extremely slow. Manitoba export grade of flour values are lower, being now quoted at from 42 to 43 shillings, but very few sales are being made, there evidently being resellers on the United Kingdom market at lower prices than those above quoted. Offerings have been made as low as forty-one shillings and six pence but they brought no business. Ontario winter wheat flour is not in such extreme demand as formerly but prices keep up fairly well, the present quotation being $6.50 Toronto and Montreal freights. The recent break in the wheat market has apparently scared off the buyers. The big bakeries and other consumers are still buying from hand to mouth and are only filling their requirements as they arise. There is no quantity selling in this direction. Exporters of flour in Ontario are considerably exercised just now over the handicaps under which they are working in the shipping of flour across the Atlantic. Unfair shipping rates charged by steamship companies, it is claimed, are seriously curtailing the overseas trade in flour, and it is feared that unless relief is found soon, the flour industry of the province and country will be hard hit. As matters stand now, it is pointed out that Canadian millers have to pay 10c to 12c a barrel more than the United States millers to export their flour from New York. In some quarters it is claimed that should these conditions continue the ultimate result will be to put many of the Canadian millers out of business,as they are rapidly losing their market in the United Kingdom. In spite of this some of the larger Ontario concerns say their shipments to the United Kingdom have been better during April than they were a year ago. However this may be it is pretty generally conceded that the milling industry generally is being seriously injured through the unjust ocean rates.

Millfeeds.—A good demand for feed flour and white middlings, a fair demand for shorts and a limited demand for bran, about sums up the millfeed situation in Toronto. An abundance of good pasturage is a factor in the limited demand for bran, but it is believed possible that the situation might easily change over night as it did last year. Reports from Ontario country points indicate that moisture is required and if the present hot spell should be protracted and dry weather sets in general millfeed conditions will be affected. June, of course is a grass month, which accounts largely for the lessened demand for feeds. Some of the smaller mills have been quoting less than the list price calls for but these quotations are only on odd cars, although one big mill in the east is reported also to have quoted from two to three dollars a ton under list price on a lot of stuff they had over from an export run. It is pointed out in the trade that no benefit results to anyone from these slashings and the only effect is to upset the market, the competition being invariably met by other mills in their dealings with their own customers The American market for feeds is reported extremely sluggish. The prevailing quotations represent a dollar off last quotations and are as follows: bran, $27.00; shorts, $29.00; white middlings, $34.00 to $35.00, and feed flour, $1.90.

Section of the busy waterfront at Port Arthur, Ont.

Seeds.—Dealers bids at country points for a few standard lines of seeds are nominally as follows: alsike, per bushel, $6.00 to $9.00; red clover, $7.00 to $14.00; sweet clover $3.00 to $3.25; alfalfa, $10.00 to $16.00; timothy $2.00 to $3.50. Alsike is now selling at $20.00; red clover at $29.50; sweet clover $9.00; timothy $11.00 per cwt., and Alfalfa, Ont., at $1.00 per cwt.

Grain.—Wheat values continue to have a downward tendency and speculators who were holding for a rise are believed to have been rather badly squeezed. Local traders point out that the United States Government estimate of wheat reserves still on the farms seems to have been much too low, with the result that deliveries of actual grain during May exceeded all expectations. The result was a decline in price. Export trade was not sufficient to absorb the surplus. On June 8, there was an upward turn to the northern wheat market on the Toronto Board of Trade caused by fear of damage to the growing crop in Alberta from frost, together with reports of a drought in parts of the American Northwest. For instance, No. 1 Northern, c.i.f. the bay ports, was

2c higher, at $1.41¼, while the options were one and a quarter cents up. Western oats were also a fraction higher. It would appear that from now on till the end of the Canadian harvest the weather news will have a powerful effect on price movement as the crop all over Canada and the continent is still in the making, except where already harvested, and liable to great damage. As the first half of June draws to a close Manitoba wheat, No. 1 Northern, is quoted at $1.41¼; No. 2 at $1.36¾ and No. 3 at $1.27½. Manitoba oats, No. 2 C. W. are quoted at 60½c; No. 3 C. W. 57½c; extra No. 1 feed 57½c; No. 1 feed 55c.

THE RYE FLOUR MARKET IN ENGLAND

London.—Canadian millers may be interested to learn that owing to the absence of supplies from Germany and Russia, there is at present quite a strong demand for rye flour in England.

As rye meal and flour are classified under a single heading, it is impossible to obtain figures giving the imports into the United Kingdom of rye flour alone, but published statistics show that combined receipts of the two commodities previous to the war averaged about 150,000 cwts. annually, all of which was attributed to Germany, the quantities assigned to Russia during the three pre-war years never exceeding 3,000 cwts.

When the war shut off trade with Germany, the United States became the principal, and practically the only, source of supply, but in greatly reduced quantity until 1918, when no less than 400,000 cwts. were sent over. In the meantime Canada had entered the trade and in 1918 shipped 8,255 cwts. of rye flour and possibly meal.

In 1919 the heavy stock accumulated resulted in arrivals falling to under 1,000 cwts., and as since then the classification "rye meal and flour" has been discontinued and merged into an "unenumerated" heading, no statistical information is available.

There was a marked increase in the quantity of rye produced in the Canadian Northwest last year, and it is understood that this is likely to be maintained, and possibly augmented, so under these circumstances Canadian millers may be in a better position to handle export business.

FLOUR MILLING IN JUGOSLAVIA

Jugoslavia, which has heretofore exported much of its grain to mills in Switzerland, Hungary and Italy for grinding, is now entering the industrial field herself.

With equipment of the most modern type, it is planned to devote the efforts of a large mill which is to be built at Zemun across the river from Belgrade to producing for export, which will take away a considerable business from other nations.

The size of the grain production shows the possibilities of a future milling industry, for in exports alone for 1921 were included such items as 87,795 tons of wheat, 329,919 tons of corn, 31,568 tons of flour, and several hundreds of tons of farina and macaroni, the last two items being new developments for the year. All of these show a huge increase over the production for export in 1920, notwithstanding poor transportation facilities, the gain in wheat being nearly 37,500 tons, in corn 202,844 tons, and in flour about 3,000 tons.

The Modern Sophocles

THE sunshine of life is made up of very little beams that are bright all the time. In the nursery, on the playground, and in the school-room there is room all the time for little acts of kindness that cost nothing, but are worth more than gold or silver. To give up something, where giving up will prevent unhappiness; to yield, when persisting will chafe and fret others; to go a little around, rather than come against another; to take an ill word or cross look, rather than resent or return it. These are the ways in which clouds and storms are kept off, and pleasant, smiling sunshine secured, even in the humble home, among very poor people, as well as in families in higher stations. Much that we term the miseries of life would be avoided by adopting this rule of conduct.

THE ORIGIN OF CORN

The common Indian corn is generally believed to be a native of the warmer parts of America, where it was cultivated by the aborigines before the discovery by Columbus; but a representation of the plant found in an ancient Chinese book in the royal library in Paris, and the alleged discovery of some grains of maize in the cellars of ancient houses in Athens, have led some to suppose that it is a native of the East, and has, from a very early period, been cultivated there, and even that it is the "corn" of Scripture; although, on this supposition, it is not easy to account for the subsequent neglect of it until after the discovery of America, since which time the spread of its cultivation in the Old World has taken place with a rapidity such as might have been expected from its great productiveness and other valuable qualities. Columbus himself took it to Spain.

Late Foreign News

FRANCE.—The weather recently has been exceptionally favorable from an agricultural point of view. The days have been warm and fine and considerable improvement is apparent in the condition and growth of all crops. It is, however, most unlikely that more than an average yield of wheat will be obtained, and as growth is so backward, the new grain will probably be harvested 15 to 30 days later than last year.

HUNGARY.—Although the prevailing weather is generally favorable for growth, there are some parts of the country where growers still complain of the appearance of the wheat plant. Wheat however, is a better looking crop than rye.

CZECHO-SLOVAKIA.—The weather continues unseasonably cool. The winter crops need sunshine and warm, dry weather.

NORTH AFRICA.—The recent rains are now said to have been very inadequate, and the situation, in so far at least as Barley and Oats are concerned is little better than before the drought was broken. On the other hand, the condition of wheat shows material improvement, and hopes are entertained that an average yield will be harvested in many districts.

WESTERN PROVINCES

WINNIPEG

WINNIPEG JUNE 15TH. 1922

THE WINNIPEG MARKETS

Flour.—It is difficult to pick out any feature in the flour market outside of the generally expressed opinion that business is very dull and that prices have dropped 50 cents per bbl. since last report.

Export and Eastern Canadian business appears to have reached the zero point. Western domestic business is fair, but is being carried on only on a hand-to-mouth basis, a situation which is credited to depressing wheat prices and a somewhat financial stringency. One Western manager of a large milling concern, with over thirty years' experience in the west, said recently: "Business is extremely quiet, but we must take the poor months with the good, and over the year we shall no doubt average up well. In past years we have witnessed many dull trade periods, but these inevitably have been followed by a bright and active business situation." Since last report flour prices have officially been lowered 50c per bbl. Competition for business is keen and it is understood that some price cutting is going on in certain quarters. Present prices are quoted as follows: Top patent spring wheat flour $7.50 bbl., seconds $6.90, first clears $6.30, in jute bags, mixed cars, 30 day terms, delivered at any point between Fort William and the western boundary of Manitoba. In 98 lb. cotton bags, prices are 20c over the jute basis. Saskatchewan points are quoted at 10c under these prices, and from eastern Alberta to the Pacific Coast values rise progressively to $7.80 for top patent at Vancouver and equal points. Vancouver Island takes $7.85 for top patent and Prince Rupert $8.00.

Millfeed.—The demand for bran and shorts continues fair but not quite so active as in the past owing to the luxuriant growth of grass on the prairies. A large part of the demand for bran is for use in connection with the grasshopper campaign, the bran forming the larger porportion of the bait which is mixed with poison and spread over the ground. No change in price of either bran or shorts is reported, quotations being: Bran $22 per ton and shorts $24, in bags, delivered, Winnipeg territory.

Oatmeal.—Business in rolled oats and oatmeal is very dull, the demand being slow. Prices have advanced 10c to 15c per bag, owing to the higher levels in the oat market. Quotations for rolled oats now are $2.80 and $2.90 in 80 lb. cotton bags, and oatmeal $3.50 in 98 lb. cotton bags, delivered, Winnipeg territory.

Rye Flour.—The local rye flour mill has closed down for the summer months. The market is reported as being very quiet with an exceedingly slow demand. Prices remain unchanged. Best patent flour is selling at $7 bbl. in 98 lb bags, medium at $6.00, dark at $5.00 and rye meal at $5.00, delivered, Winnipeg territory.

Linseed Products.—The demand for these goods is showing marked improvement, and the market is considerably more active than it has been for some time. The local mills have good supplies on hand. Oil cake is quoted at $50 per ton and meal at $52, in bags, mill points. Raw oil is quoted at $1.00 per gallon and boiled oil at $1.03.

THE GRAIN MARKETS

During the closing days of May and opening day of June, the wheat market was very erratic and showed a decidedly easier tendency, the July future declining approximately ten cents in ten days. On May 26, July wheat closed at $1.34¾, on May 27, the same future closed at $1.35¼ and from then on worked irregularly lower, closing on June 6 at $1.25⅝, the lowest closing quotation of the period mentioned.

Near the end of May, with the abnormal situation in the May deal practically adjusted, the foreigner appeared to show more interest in Canadian wheat, trade not only being done in the old crop but direct cable business was also worked in the new crop, seaboard shipment as far ahead as next October. The export business was chiefly in the cash article, however, there being a good enquiry for Nos. 1 and 2 northern. The firmness in the cash article has been one of the features of the market, there being, on the whole, an excellent demand for Nos. 1 and 2 northern by exporters and domestic millers, while mixing houses were good buyers of No. 3 northern and lower grades. Around June 5, however, this demand eased off and was not apparent on June 6, so consequently premiums worked lower, although any decline was checked to a large extent by the light offerings. Farmers continue to hold their supplies for $1.50 wheat, basis No. 1 northern.

On account of numerous holidays on the continent during the early days of June, outside news has been very scarce, but now with business in full swing again, cables were very quiet and showed only a moderate interest, at the same time, however, showing considerable declines in sympathy with the break in the markets in the United States and Canada.

The weakness in the markets on this side has been chiefly caused by considerable liquidation in July wheat, at Chicago especially, and a lessening off of export demand.

Weather conditions have been generally ideal and both Canadian and American spring wheat crops have been making very satisfactory progress. There have been several reports of the appearance of rust and chinch bugs in winter wheat crops, but these have not been viewed with much alarm, the general opinion prevailing that the crop is too far advanced to be damaged to any great extent.

Coarse Grains,—The coarse grains have been, on the whole, very quiet, with price changes being largely governed by the action of wheat. At times there has been scattered liquidation in the oats market but trade has been generally dull. Stocks appear to be ample to take care of immediate needs and reports continue to come through that American varieties are getting the preference at the discount. Barley and rye have been extremely dull, moving in sympathy with the entire grain list. There has been some liquidation in flax and the general tendency has been easier. Crushing interests have been operating in moderate proportions at a scale down.

FOR FLOUR EXPORTERS' ATTENTIONS

Winnipeg.—Miss E. Cora Hind, agricultural editor of the Winnipeg Free Press, who has spent the last four months in England and Scotland, recently addressed a large meeting in London held under the auspices of the British Empire Producers' Organization. Miss Hind said that while she had been in England she had heard nothing but praise for the quality of Canadian wheat and flour, but it had surprised her that Canadian flour, as such, could not be bought in the retail shops. Canada was missing a great opportunity in not so familiarizing the British housewife with Canadian flour that she would always demand it.

The general opinion of western millers is that Miss Hind has discovered something that Canadian millers should immediately take up and rectify by good advertising in the old country. It is believed that a large majority of Old Country bakers only know of those Canadian brands of flour which they come in contact with by actual use.

THE FLAX MARKET SITUATION

Winnipeg.—The condition of the soil and reduced acreage of wheat in the Northwest would indicate an increased acreage of flax, but continued rains and difficulty in securing seed flax may offset.

Values of seed and oil have not changed recently. Argentine seed is slightly lower and parties handling foreign oil are naming lower prices. Demands for shipments of oil on contracts are very urgent, but little business is being booked for future shipment.

Both foreign and domestic oils are reported to be offered at less than cost to replace from present value of seed or quotations of importers; this condition being more of a personal nature than one following the position of supply and demand. There is no change in world's condition of prospective supply and demand.

EXPECT MORE TRADE WITH B. W. I.

Winnipeg, Man.—With the recent putting into effect of the preference trade agreement between Canada and Jamaica, local millers are looking forward to a better inquiry for Canadian flour this summer from the people of the island. The tariff preference for Canadian flour over United States is 50 per cent.

TRADE OPPORTUNITIES

With a view to assisting the Canadian milling trade in the development of a permanent and profitable export business, "Canadian Milling & Grain Journal" publishes in each issue a selected list of trade opportunities, the investigation of which should prove of value. "Canadian Milling & Grain Journal" is taking special pains to ascertain the reliability of each opportunity presented and will gladly furnish any further information regarding them that may be desired.

THE EDITOR.

No. 264.—Mr. D. I. Kenton, Apartade, P.O. 1627, Havana, Cuba, wishes to get in touch with Canadian exporters of hay, oats and flour. He has a representative in Canada who would be pleased to call on prospective customers. References furnished.

No. 265.—The West Indian Sales Co., Port au Spain, Trinidad, which maintains excellent facilities for handling flour, desires to obtain a Canadian agency for the same.

No. 266.—Messrs. McConnell & Reid, 19 Waterloo St., Glasgow, are open to receive quotations on Canadian winter wheat flour and Manitoba clears.

GRAIN SHIPMENTS VIA VANCOUVER

Vancouver.—During the month of April 1,106,000 bushels of grain passed through this port, constituting a record. Of this quantity 518,000 went to the Orient and 588,000 to Europe. To date, 6,048,068 bushels of western Canadian wheat have been shipped through this port to British and foreign markets this season, as against 640,000 bushels in 1920-21, according to statistics published here by the Vancouver Merchants' Exchange. From October 1, 1921, to April 8, this year, shipments to Japan amounted to 2,858,079 bushels; to the United Kingdom 3,189,327 bushels, and to the United States, 6,666 bushels.

Edmonton.—Returns of crop yields for 1921 from 3,114 threshing machines give a total of all grains for the province of 56,447,972 bushels. Winter wheat averaged 16.98 bushels to the acre; spring wheat 11.76 bushels; oats 30.13 bushels; barley 23.56 bushels; rye 11.07 bushels, and flax 4.78 bushels.

THE WESTERN MARKETS

The following report furnished by Messrs. Baird and Botterell, 105 Grain Exchange, Winnipeg, shows daily highest price levels from May 29, 1922, to June 10, 1922. inclusive.

	May 29	May 30	May 31	June 1	June 2	June 3	June 5	June 6	June 7	June 8	June 9	June 10
May Wheat	1.35¾	1.31¾	1.29	..	..	King's Birthday—Exchange Closed	..	..	..	..	..	..
July Wheat	1.35⅜	1.31	1.29¾	1.31⅜	1.33		1.30	1.27⅞	1.27⅜	1.27	1.27½	1.27⅛
October Wheat	1.22⅞	1.20	1.21	1.22¾	1.23¼		1.19⅝	1.19¾	1.18¾	1.18¼	1.19⅛	1.18⅞
May Flax	2.40⅝	2.37	2.33¾	..	..		..	..	..	..	..	..
July Flax	2.41½	2.38	2.35	2.38	2.39		2.37½	2.35¼	2.33¾	2.33½	2.30	2.25½
October Flax	2.31½	2.26¼	2.24¾	2.27	2.29⅜		2.25½	2.25½	2.22⅞	2.22½	2.17½	2.14
May Rye	1.04	1.00	0.99	..	..		..	..	..	..	..	..
July Rye	1.04½	1.01⅝	1.00	1.02½	1.02⅝		1.00	0.95¾	0.95½	0.94⅞	0.95	0.94⅛
October Rye	0.92	0.88	0.88	0.89¼	0.92½		0.86½	0.88½	0.88	0.86½	0.85	0.84
May Barley	0.67½	0.66¼	0.66½	..	..		..	..	..	..	..	..
July Barley	0.67¾	0.66⅞	0.66⅞	0.67	0.68½		0.67½	0.67⅛	0.67	0.66⅝	0.66¼	0.66⅛
October Barley	0.63¼	0.62¼	0.62⅛	0.63	0.64½		0.63½	0.61¾	0.61⅜	0.61½	0.61½	0.61¼
May Oats	0.53⅞	0.53½	0.55½	..	..		..	..	..	..	..	..
July Oats	0.52⅝	0.51⅝	0.53½	0.53⅝	0.54⅝		0.53½	0.53⅜	0.53¼	0.53¼	0.53¼	0.52½
October Oats	0.46¾	0.45¾	0.46⅞	0.47⅜	0.48¼		0.47	0.46⅞	0.46⅜	0.45½	0.47	0.46¾

Foreign Flour and Grain News

Reports from all parts of the country indicate a general stagnation in the milling trade both as regards export and domestic business. The behaviour of the wheat market finds millers at sea in regard to stable prices and a recent reduction in the prices of both spring and winter wheat grades is regarded as being but the precursor of others which will have to be put into effect if any semblance of activity is to be maintained. It is understood that with a view to meeting the situation which is developing towards a readjustment of flour prices representatives of the milling interests are at present endeavoring to arrive at some basis for a fair valuation of their products and will shortly issue a new schedule of prices which will undercut quotations at present in force. Such a move should stimulate trade during the present exceptionally dull period.

Sentiment in wheat for the past two weeks has been decidedly bearish and so has the general run of day to day news. The market, however, has not reflected surface conditions and at this writing appears about to anticipate a much stronger situation than indicated. The current delivery month is giving an especially good account of itself in face of a voluminous movement of wheat to Chicago from all directions for delivery on contracts.

It is evident that the leading shorts are scouring the country for wheat to fulfil their contracts, and this might result in anything but a bearish situation later in the season. The grain is said to be going into the hands of merchandisers and will go into distribution rapidly instead of remaining in Chicago, a drug on the market.

The condition of the winter wheat crop is generally fair in Western Europe and good in Central Europe. Warmer weather is needed to aid growth in France and Great Britain. The area sown in Italy is 288,000 acres less than yast year, but 510,000 acres more than the last 5-year average. The crop is up to the average in Egypt but rain is needed in Algeria, Tunis and Morocco.

The first estimate of wheat production in British India is 365,235,000 bushels, which is 140.4 per cent. of the corresponding estimate for 1921, and also above the 5-year average (final estimates) which was 346,737,000 bushels. It is expected that the Argentine production will exceed the original official estimate of 154,873,000 bushels. Recent reports indicate that production in Australia will probably not equal the early official estimate of 134,184,000 bushels.

RUSSIA.—Of the total amount of white flour now being sold in Riga, 75 per cent is prime patent flour of best quality and the rest is of the cheaper grade. American flour is very popular here, but a well-known Canadian brand is considered a close competitor, with perhaps a slight lead at the present time.

INDIA.—The production of wheat in India for the season 1921-22 is 365,539,000 bushels from 28,203,000 acres as compared with 250,469,000 bushels from 25,722,000 acres, the final estimate for the season of 1920-21, and with 347,909,000 bushels from 31,142,000 acres, the annual average for the five-year period 1915-19. The wheat production of India for 1921-22 is therefore 116,070,000 bushels, or 46 per cent more than that of 1920-21, and 18,630,000 bushels, or 5 per cent more than that of the five-year average.

ITALY.—Fine, warm weather prevails. The change to more seasonable conditions has had a beneficial effect on the crops in the Northern and Central Provinces. There are no fresh reports from the South.

BULGARIA.—Latest news from this grower indicates a favorable outlook for all cereal crops. Particular mention is made of the young spring seedlings, which are coming up well after the recent beneficial rains.

INDIA.—Monsoon rains have fallen earlier than usual, a circumstance which is not regarded as favorable for agriculture.

ARGENTINA.—Cable advices report that the present damp weather is favorable for ploughing, although hindering the conditioning of maize. Buenos Aires confirms the estimate of 9,000,000 quarters, the surplus of wheat availabl for export on May 1.

GREAT BRITAIN.—There is still a quiet demand in flour, although in some districts a moderate to fair trade is reported. Home milled flour in London has been reduced 1s. 6d. (0.34), but in the Liverpool districts the official price is unchanged. In the adjacent districts to the Liverpool area, straights are to be had at 2s. (0.46) under the Liverpool official price. The demand for foreign is now very slow and importers are inclined to press sales. There is less doing in forward parcels, Manitoba patents being quoted down to 44s ($10.12) for May shipment, other descriptions, however, are unchanged. There has been a moderate trade in Australian at around 41s. 6d. ($9.48) to 42s. ($9.66) c.i.f. for passage lots.

ROUMANIA.—Mild, warm weather, accompanied by light rains and showers has lately been experienced. The outlook for the growing crops could hardly be better.

AUSTRALIA.—Having regard to the favorable seeding conditions lately reported it is anticipated that a full acreage will be sown to wheat.

POLAND.—The crop just harvested was planted under most adverse circumstances following the Bolshevik invasion, but nevertheless the area sown was a substantial increase over the previous year.

JAPAN.—According to a statement recently issued by the Japanese Department of Agriculture and Commerce relative to the results of investigations received from the various agricultural experimental stations throughout that country, the spring wheat crop in Japan this year will be poor owing to the unfavorable weather conditions everywhere experienced. Dryness of soil during the sowing period caused considerable delay in sowing, with consequently bad germination. This was followed by a period of intense cold, together with heavy rainfalls, with the result that the grain is overgrown.

The Elevator Operator

EXPLOSIVE PRESSURE OF DUSTS.

Considerable experimental work has been carried on to determine inflammability of dust. It has been found that dust is dust and no matter what its nature is liable to explode when properly diffused in the air and in right conditions. Dusts until recently considered non-explosive have "let go" with terrific force as demonstrated in explosions of aluminum, rubber, cork and fish dust.

Having determined by experiment that most any kind of dust will explode it has been a source of surprise that such inoffensive looking stuff has such a "kick" in it. The explosive pressure of various kinds of dust is given in the following table:

Kind of Dust.	Pressure Generated. Pounds per Sq. Inch.
1. Stinking Smut of Wheat	15.9
2. Dextrin Dust from Dextrin Kilm	14.6
3. Powdered Wheat Starch	14.0
4. Starch Dust (corn) from Dry Starch	13.8
5. Tan Bark Dust (200 mesh)	13.3
6. Wheat Elevator Dust (side walls)	13.0
7. Wood Dust, from chipper room	12.8
8. Oat and Corn Dust	12.6
9. Sugar (lump pulverized to pass 200 mesh)	12.2
10. Feed Dust from dust collector	11.8
11. Potato Flour	11.7
12. Wheat Flour, from packing room	11.2
13. Malt Dust	10.6
14. Fertilizer Dust	10.5
15. Tapioca Flour	10.4
16. Pittsburgh Standard Coal Dust	10.1
17. Cocoa Dust from Cocoa Bolters	9.9
18. Sulphur Dust (extra fine)	8.8
19. Cork Dust (ground)	7.4
20. Rice Flour	5.6

What Will Cause Explosions.

To make the figures given above more understandable and give a clearer idea of the tremendous pressure created when dust explosions occur, let us illustrate in terms of weight, area and lifting power.

Coal dust and flour explosions are propagated at about the same velocity and develop approximately the same pressure. Upon investigation it has been found that .02 of an ounce of coal dust per cubic foot of air space is sufficient to product an explosive mixture. On the basis of .02 of an ounce per cubic foot you only need in the average room 20x20x10 eighty ounces; or five pounds of dust diffused in the proper proportions through the air in a room of that size would be sufficient to blow apart. One hundred pounds of dust would blow apart twenty rooms 20x20x10 or over eighty thousand cubic feet. A ton of dust, 2,000 pounds would be sufficient to blow apart four hundred rooms 20x20x10 or a total of 160,000 cubic feet. In an experiment a box was constructed containing about two cubic feet of air space and then two ounces of flour dust was blown into a Bunsen burner on the inside of the box and the explosion was sufficient to lift two men standing on the lid of the box.

If a sack of flour should suddenly be thrown into suspension, diffused with the right proportions of air and subject to favorable conditions the explosion pressure generated would lift 2,500 tons 100 feet high.

The Principles of Dust Collecting.

Dust collection is the handling of suspended or floating dust and is really ventilation.

Dust removal has to do with static or settled dust and is an entirely separate, quite new, distinct and highly specialized branch of engineering.

This menace must be guarded against and adequately. The initial cost may seem expensive but a saving in cost will probably get about the protection you pay for. It is like carrying your own insurance risk. When an industry determines to carry its own risk, thinks its present precautions as to "dust collecting" are adequate, the way would seem clear but for the ghost of Banquo, the Catastrophe Hazard, the dust explosion which follows along the paths of all human activity and seizes on the unguarded, unknown danger point.

The law of average works day and night in this game just as it does in the weather, and the industrial executive who is brave enough to dispense with an adequate protection is probably headed for an unwelcome introduction to this same old law of average, which introduction may unfortunately come too late.

BIDS IN ELEVATOR WORK

When building remember that it is often poor economy to accept the lowest bid, providing that bid is made by any one not an experienced grain elevator builder. The barn "architect" can perhaps give you a much more attractive house as appearances go, but bear in mind that the outside of the house does not handle the grain or load the cars.

OIL GROOVES FOR SOLID BEARINGS

To put an oil groove in a solid bearing first grease the shaft then put a sheet of writing paper around the shaft and glue it. Then take a solid cord the size of the groove desired and make a

figure 8 round the shaft. Tie the cord in a hard knot, getting the knot as near the oil hole as possible. Then put in the bearing and pour your babbitt.

Dockage testers and moisture testers should soon play an important part in the everyday life of the elevator operator. But some will no doubt attempt to worry through another season without this equipment. Remember however, that your grain at terminal points is sold on the basis of moisture and dockage, and that unless it is bought from the farmers on the same basis someone is likely to lose much money.

Elevator, Mill & Personal Notes

Toronto.—The McLeod Milling Company, Ltd., with head office in Stratford, has been chartered to engage in a general milling and grain business. The concern was originally known as the Stratford Milling Company, Ltd., and the present incorporation is a reorganization of that company. The capital stock is $100,000.

Toronto.—The plant of the Faramel Feed Company, Dupont Street, Toronto, was almost entirely destroyed by fire on May 31st. The fire was first reported by a watchman employed by the Lake of the Woods Milling Company, Ltd. The company was carrying a heavy stock, chiefly in the grain tower, and this, together with the building, was destroyed. The secretary of the company is Mr. David Paul.

Coronation, Alta—Mr. G. A. Dafoe is a recent purchaser of a XXth Century flour mill from Canadian Allis-Chalmers, Ltd., Stratford, Ont.

Listowel, Ont.—The plant of the Pfeffer Milling Co., Ltd., here was gutted by fire recently.

Medicine Hat, Alberta.—Large export orders are being received by local manufacturers. Among those recently received are: Ogilvie Milling Co., Ltd., 140 tons of flour for London via Montreal, and 70 tons for same destination via New York; Alberta Linseed Oil Mills, 100 tons of oil cake for Dublin, and 50 tons for Belfast; Hedley Shaw Milling Company, Ltd., 350 tons of flour for London and 728 tons for Europe.

Pine River, Man.—Messrs. Charzewski and Napastiuk have purchased a 50-barrel Midget Marvel Mill from the Pollard Manufacturing Company, Niagara Falls, Ont., for installation in their new up-to-date milling plant.

Winnipeg.—The forthcoming sale of the real estate and all the holdings of the Grenfell Milling & Elevator Co., of Grenfell, Sask., has been announced by shareholders of the company.

Vonda, Sask.—To date this season over 800,000 bushels of wheat have been shipped from the local grain elevators. All the local elevators have had a good season and the grain buyers are looking forward to even greater returns this year.

Regina, Sask.—The Melville Milling Company, Ltd., has been dissolved. Re-organization is being spoken of.

Abbotsford, B.C.—The Brackmann-Kerr Milling Company has opened a branch here.

Gorrie, Ont.—Mr. J. Steinmiller has sold his mill here to Mr. B. Maguire, who, it is understood, will continue the business.

Stettler, Alta.—Mr. William Drewes has installed a 50-bbl. XXth Century flour mill. These mills are manufactured by the Canadian Allis-Chalmers, Ltd., Stratford, Ont.

The Canadian Flour Export Company, Limited, directors held a meeting in Toronto recently when routine business was transacted.

Mr. J. P. Jones, one of the members of the Board of Grain Commissioners for Canada, who recently made a study of the elevator situation at Vancouver, is reported as saying that the Board will recommend to the Government at Ottawa the erection of a new elevator on the Vancouver waterfront. The site selected is on the Kitsilano reserve, and will provide a grain terminal for the Canadian National Railways. The suggested capacity is 1,250,000 bus.

Mr. Alfred Homuth, an employee of the Teeswater Flour Mills, Ltd., was caught in the shafting in the mill on May 29th and was whirled around several times before being thrown clear. He was seriously injured, but his recovery is expected.

Mr. C. B. Watts, Secretary of the Dominion Millers' Association, Royal Bank Building, spent some days in Ottawa recently, attending conferences of the National Association, on various matters pertaining to the milling and grain trade.

Mr. W. C. Duncan, has been appointed manager of the New York office of the Maple Leaf Milling Co., Ltd., in succession to Mr. W. S. Harris, who recently resigned. It is understood that Mr. Harris will go into the brokerage business for himself in New York.

Mr. M. A. Halliday, of the Royal Milling Company, Chesley, Ont., was a recent visitor to Toronto.

Mr. W. C. Omand, Royal Bank Building, Toronto, has not yet sufficiently recovered from his recent severe illness as to be able to resume his work. Mr. Omand is still confined to his home.

Mr. J. K Kennedy, of the Morrow Cereal Co, Ltd., has just returned from abroad.

Mr. J. C. Gage, president of the Consolidated Elevator Company, Ltd., Winnipeg, and a past member of the Board of Grain Supervisors, was a recent visitor in Montreal. While in the metropolis, Mr. Gage was introduced on 'Change by Mr. F. C. Cornell, secretary of the Canadian National Millers' Association.

Mr. R. W. Tilton, representative for the Maritime Provinces with head quarters at St. John, N.B., for the Western Canada Flour Mills Co., Ltd., was introduced on 'Change in Montreal recently by Mr. Jack Marshall, Montreal manager for the company.

Mr. C. B. Watts, manager of the Dominion Millers' Association, Toronto, was a recent visitor in Montreal.

Mr. N. McL. Paterson, president of the Paterson Grain Company, Fort William, has returned to his home from a business trip to Winnipeg.

Mr. J. Speers, manager of the Lake Shippers' Clearance Association, Fort William, Ont., spent some days in Winnipeg recently.

Mr. Harry Sellers, superintendent of the Northwestern Elevator Co., Ltd., Fort William, Ont., was a recent business visitor in Winnipeg.

If your miller has to oil, sweep and operate your mill and be responsible for goods turned out, do not for the sake of everything that is good and holy, expect him to wait upon trade or any other thing.

THE PRACTICAL MILLER

IMPROPRER OILING METHODS THE CAUSE OF MANY BEARING TROUBLES

It has been, unfortunately, the experience of many mill and elevator operatives that numerous hot bearings have been caused by the use of the wrong oil. If, say, a spindle oil is used instead of an engine oil, heating will result because the oil is too light in body to provide lubrication. If a very heavy oil is used in place of spindle oil, heating will result because the oil is too heavy to spread over the bearing surfaces, owing to the high speed at which the spindles operate. The fluid friction, also, will be excessive.

In some cases, oils like linseed oil or turpentine have been used by mistake, in other cases, the use of badly filtered oil or waste oil instead of fresh oil has caused great trouble.

When hand oiling is employed, bearings will overheat if the application of oil is not sufficiently frequent or regular.

When drop-feed oiling is employed, many hot bearings can be traced to empty lubricators particularly when the oil containers are of small capacity. Sometimes bearings heat up because the oil congeals in the lubricator or in the feed pipes and fails to reach the bearings.

Parts of the lubricator, or the oil-feed pipes from the lubricator to the bearings, may become choked with deposits which may cause sufficient reduction in the oil feed to produce bearing heat. Fine sawdust in sawmills, or wood-working shops, flour dust in flour mills, lint in cotton mills, etc., have been responsible for such trouble.

The Use of Cotton Waste

Cotton waste, still largely used for cleaning down engines and machinery, should never be used for this purpose, as fine fluffy matter from the waste gets into the lubricators and oil, causing trouble. Muslin or silk cloths are much to be preferred, as they are free from fluffy matter and can readily be cleaned.

Another source of trouble is the escape of oil between the bearing housing and the bearing brass. With a liberal oil feed, the bearing will give no trouble, but when even a small reduction in the oil feed is attempted the bearing will heat up, as only the surplus oil has been reaching the bearing itself.

Very long bearings sometimes give trouble if they have too few oil inlets. For instance, a bearing more than 12 inches long with only one dropfeed oil inlet at the centre is always liable to be a trouble maker.

Some bearings are hard to lubricate because the shaft pressure is upward instead of downward. This makes it difficult for the oil to spread, unless it is introduced at the bottom of the bearing and there is provision against its too free escape.

In some ring-oiled bearings water of condensation from steam or a very moist atmosphere enters and accumulates in the bottom of the bearings. The water gradually lifts the oil out of the bearings, until finally the oil rings revolve in water and heating occurs.

In ring-oiled bearings, deposits formed by the oil itself or by impurities entering the bearing may cause the oil rings to stick, so that with their failure to revolve the oily supply fails and the bearing heats up.

Bearings lubricated by the splash oiling system may heat if the oil level is too low to provide adequate oil spray, or if the oil has become emulsified by the presence of water of condensation and cylinder oil from leaking glands.

Water, either from the engine itself, such as condensed steam from leaking piston-rod glands, or from leaking cooling-water coils, etc., sometimes finds its way into the bearings and displaces the oil.

INSECT INFESTATION IN FLOUR MILLS DIRECTLY TRACEABLE TO UNCLEANLINESS

Since a large proportion of insect infestation in flour mills and warehouses is directly traceable to a disregard for cleanliness, it is very important to keep the entire plant scrupulously clean by sweeping up all accumulations of flour and meal on the floors, in the corners, under machinery, and in all other places where it may find lodgment. This material should be removed from the mill and disposed of in such a manner as not to be brought back into the mill.

About every six weeks during the summer, all accumulations of flour or meal should be brushed out or removed from the elevator booths and flour conveyors, and destroyed by burning. Before removing these accumulations, it is well to go over the elevator legs with a spout maul and jar loose the infested accumulations.

In flour warehouses the floor should be thoroughly swept and all accumulations removed after each movement of flour. All walls and ceilings of the mill or the warehouse should be smooth, so as not to afford hiding and breeding places for the insects. These walls and ceilings should either be painted or kept whitewashed.

In order that infestation be avoided in the dark corners and other places in the basement, a liberal amount of air-slaked lime should be used. This lime not only will act as a repellant for the insects, but will tend to destroy some of the objectionable odors and sweeten the air.

Buildings should be constructed so as to avoid damp, dark places. Floors and walls should be joined so that accumulations along the edges and in the corners can be easily swept out. Floors of all basements should be cement, and all walls should be smooth.

All machinery should be placed high enough to allow cleaning and brushing beneath it. As far as practicable, the bottoms of all flour conveyors should be metal, and should be rounded in such a manner as to allow the least amount of flour or meal to accumulate along the sides and at the ends. The hoppers of the rolls should be constructed of cement, and in such a manner as to allow no flour to accumulate in inaccessible places.

Sacks or bags should not be stored in packing rooms or in any part of the mill where flour or meal may collect on them and thus afford breeding places for insects. The sack room should be a separate room from any part of the mill.

Densil Crude Oil Engine Economical and Dependable

The development of the crude oil engine, of diesel or semi-diesel type, appears to have reached a stage where dependability, the first asset of a mechanical prime mover, is unquestioned.

There are now available records to convince the most wary that the modern examples of this type of engine can be relied upon for unvarying efficient service under all conditions.

It may surprise many to know that of the hot bulb or semi-diesel type of engine, more than one hundred makes are now on the market in different parts of the world. It has been largely adopted in European countries for a variety of uses, over the past twenty years. One firm alone has turned out over 25,000 sets of which the first one is still giving good service.

In Canada the position is quite different, and the adoption of the crude oil engine has been quite limited in extent, due largely to the interference of war conditions.

One of the most popular of European makes of semi-diesel engines is the "DENSIL." It is manufactured in a wide range of powers from 7 B.H.P. upwards, and, usually by means of a belt drive, is adaptable for all purposes where an independent, economical and dependable motive power can be utilized.

The installation of an engine of this type, as against a steam plant, means—

A reduction or fuel weight of from four to one.

A reduction of machinery weight of from two to one.

A reduction of machinery and fuel space of from two to one.

A substantial reduction in fuel cost.

Elimination of stand-by fuel losses.

No firemen required.

Cheaper purchase, installation and running costs.

The advantages of this type of engine as against the gasoline engine are,—

Greater degree of safety, owing to use of high flash oil.

Greater economy, due to use of cheaper fuel.

Greater simplicity, due to elimination of electric ignition.

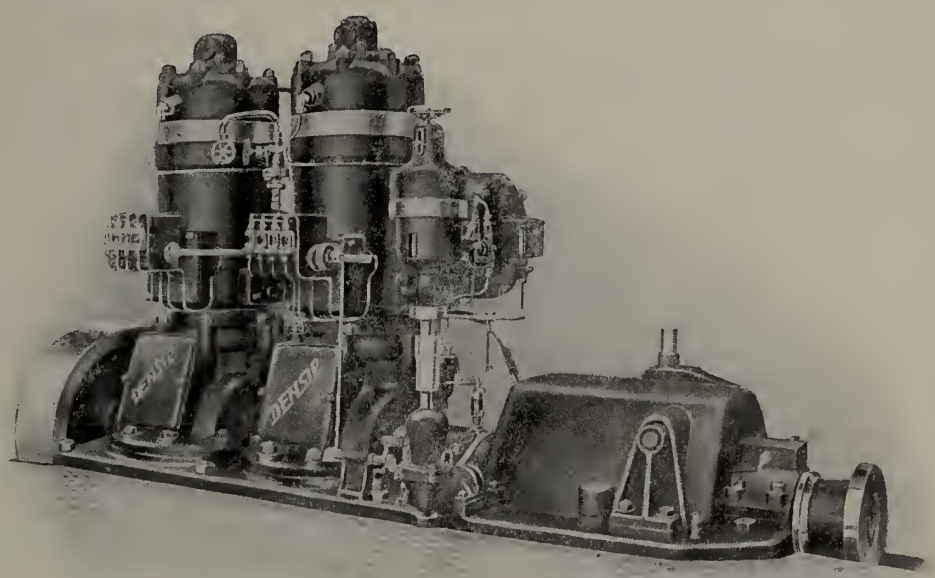
More sturdy construction and greater suitability for heavy duty work.

Economy can be construed in two days, viz., increased efficiency and decreased cost.

It is claimed that the "DENSIL" fulfils both these conditions to a marked degree.

For instance, an actual example of how the operating costs of a steam and an oil engined tug compare is as follows, the figures being taken from the books of the firm which owned them:—

	Oil-fired boiler and steam engine	Internal combustion oil engine
Horsepower	160	160
Cost of machinery installed	$13,100.00	$11,150.00
Fuel:		
Consumption per day of 10 hours, gallons	420	137
Cost of 30 days' fuel	$ 233.00	$ 81.00
Cost engine repairs per month	29.00	15.00
Cost of boiler repairs per month	19.50	.....
Engine Room Crew per Month:		
Engineer	120.00	120.00
Fireman	60.00	....
Total fuel and wages per month	$ 413.00	$ 201.00
Total fuel and labor per year	$4,956.00	$2,412.00



General View of Densil Crude Oil Engine

The "DENSIL" engine runs on a consumption of approximately half a pint of crude oil per horsepower per hour. It has been placed on the Canadian market by THE CRUDE OIL ENGINE CO. OF CANADA, Montreal. Responsible agents are being established in all important centres, and a spare part reserve is being established in Montreal.

THE CRUDE OIL ENGINE CO. is very optimistic as to business offering, and, as has been previously indicated, there seems to be no question but that the adoption of the oil engine in the industrial field in Canada is a question which merits the closest of attention.

THE PRACTICAL MILLER

EXPERIMENTAL BAKING TESTS

In all experimental baking tests, conducted in the mill laboratory, it is of the utmost importance to add the correct amount of water to the dough, as the behaviour varies rather radically according to the degree of slackness. Different flour vary so much in character that it is impossible in many cases to judge accurately how much water should be added until after an actual baking trial has been made. Some flours will take up enough water, without becoming sticky, to make a loaf of poor, flat shape; while others (Durum wheats very often) become exceedingly sticky and almost impossible to handle while still very tight. These facts show the necessity for using baking pans with low sides, so that the dough may clearly show its character, and for repeating the bakings so that the best amount of water for each kind of flour may be accurately determined.

To the commercial baker there is an obvious advantage in adding a great deal of water. By the use of dry flour for dusting he can handle dough which could scarcely be managed in experimental tests, and by using pans with rather high sides he can keep the dough from spreading. In this way he produces a very moist loaf, which is more profitable to him and which seems to suit the taste of the public. Why so many people prefer wet and relatively unwholesome bread to a drier and obviously superior product is a mystery.

Experiments in which varying amounts of water were added to the same flour have shown that with more water the fermentation is more rapid, and the volume of the loaf is greater. An excess of water, however, spoils the form of the upper crust which becomes too flat.

EUROPE'S WHEAT ACREAGE

The area of winter wheat for 1921-22 in European countries, for which figures are now available, is 31,397,000 acres. This is 1,399,000 acres less than last year. The countries covered are Belgium, Bulgaria, Finland, Spain, France, Poland, Roumania and Czecho-Slovakia. The total area sown to rye for the season of 1921-22 in the same countries is 18,808,000 acres, as compared with 15,000,000 last year. The increase occurs mainly in Poland, where the area sown to rye is 11,940,000 acres, as compared with 6,872,000 acres last year. Other countries show small decreases. Planting of corn is progressing rapidly in Central Europe, the report said, although there is complaint of excessive rain in some sections.

REMOVING GLUE FROM OLD BELT.

In taking a belt joint apart to shorten the belt the old glue must be removed from each splice. An easy and satisfactory way to remove this old glue is to use a rasp, and under the splice lay a half round piece of wood about three inches wide. This half round raises the lap so the rasp can be used to much better advantage, and is moved along as the lap is cleaned.

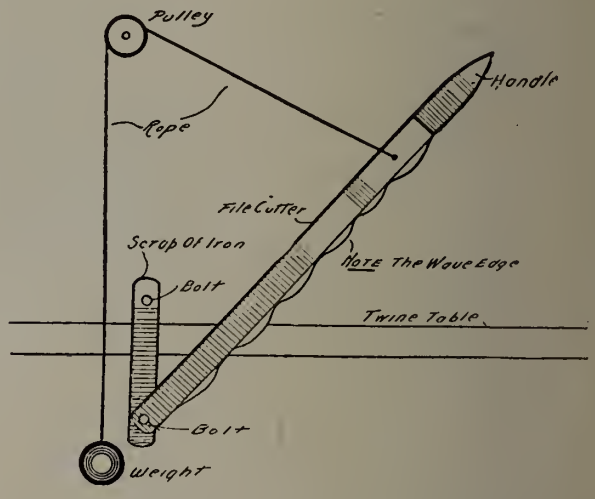
BRUSHES KEEP CORRUGATIONS CLEAN

It is a good idea to have brushes on all breaks as they keep the corrugation free from dough balls or any foreign matter that tends to stick or gum up the corrugation.

Even if you have no trouble of this nature, they are well worth the money for the assurance that your corrugations are being kept clean, otherwise if they should gum up, to whatever extent, it decreases the efficiency of the rolls just that much, and causes the stock to leave the rolls in a mucky condition, which is improper. In adjusting the brushes they should be set to touch the rolls with the end of the bristles in order to do correct work. If pressed against the rolls until the bristles bend over, it is apt to press the stock against the rolls instead of cleaning it off.

AN IMPROVEED TWINE CUTTER

Here is an excellent method of cutting twine without the use of a pocket knife which gets mislaid as often as not, and which, even though of the best will not stand more than a dozen cuts of twine.



The sketch shown illustrates a moveable blade. This blade which is nothing more or less than a well-sharpened steel file works with a back and forward motion, just as if one were cutting bread with an ordinary knife. The edge of the file is sharpened in the wave fashion shown. Near the handle end of the file is bored a hole and from this there is conveyed to a pulley a cord at the end of which hangs a small weight which keeps the knife turned up ready for use when required.

QUALITY OF MANY BRANDS EQUAL

It is only natural that each miller should believe his flour to be the very best manufactured, but one is often inclined to wonder whether there is an appreciable difference in the same grade of flour manufactured by different mills. Tests were recently made at the Dominion Experimental Farm, Ottawa, on the relative merits of 23 brands of commercial flours. From two to four grades of flour

THE PRACTICAL MILLER

from each milling company were examined and tested. Some of the conclusions reached were apparently unexpected, but others are matters of common knowledge. Among the latter was the striking similarity among the highest grade flour of all the milling companies Mills of similar capacity and using a similar mixing tend to a common standard of production. But the differences in baking strength between the various grades tested were quite marked. Seven samples of top patents showed an average baking strength of 93; seven samples of second patents, 94; and seven samples of lower grade, 95. While the second patents and lower grades produced a lighter loaf than the top patents, the latter excelled in color.

CHLOROPICRIN AS AN INSECTICIDE

Various chemists have shown from time to time that chloropicrin is a powerful insecticide, which is effective for the destruction of certain parasites. It is chiefly known to millers for its value in eliminating weevil from wheat. Its action on the germination power and the cultural value of seeds, however, remained to be determined.

In a previous experiment carried out by a French chemist, several samples of wheat were treated, either by putting the liquid on the closed sacks or by placing the chloropicrin in vessels placed close to them. With a dose of 20 c.c. per cubic metre of space, or per pack of about 80 kg., the grain weevil (Calandra granaria) was destroyed within 24 hours without apparent harm to the germinating power of the grain. The wheat alucide (sitrotroga cerealella) was also completely destroyed under similar conditions.

In a second series of experiments in the laboratory, samples of seeds of various cultivated plants were placed in dishes under a bell jar and treated for varying periods with chloropicrin in doses varying from 15 to 50 c.c. per cubic metre. Afterwards the seeds were removed and put to germinate under filter paper in the open air without artificial heat, and compared with untreated controls.

DOUGH ON WATCHMAKER'S BENCH

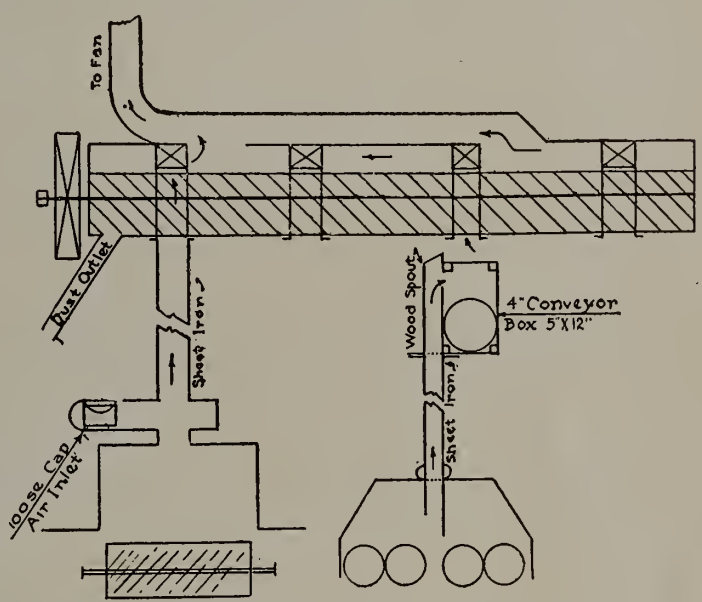
Two barrels of flour are used every week in making watches at a well-known factory, which turns out from two to three thousand watches a week. Since a baker uses about three pounds of flour to five loaves of bread, it follows that for every watch the maker uses the equivalent of almost a third of a loaf. The flour is made into dough, and the dough is used to handle the screws, rivets, and other small parts. Each man in that part of the business has a lump of dough always at hand; and when he wants to examine a screw he jabs the piece of dough on it. Then, turning it over, he has a good chance to look at it with his watchmakers' microscope eyeglass. Many of the screws are too minute to pick up easily with the fingers, and many more, though large enough to be picked up, would be covered by the fingers or the forceps as to be almost hidden from sight.—Flour & Feed.

PLAN FOR IDEAL ROLL SUCTION

There are many devices in flour mills called roll suctions which are more or less unsatisfactory, and a lot of trouble and vexation to millers.

The device here illustrated is not new in its entirety. There are many mills operating roll suctions on this principle and, while the first cost is a little more than the sheet iron pipe device now in use in so many small and medium sized mills, it gives universal satisfaction.

The sheet iron pipe device soon fills up with dust and is useless, while the box trunk type with



conveyor is the cheapest in the every day use and is a source of satisfaction to the miller and mill-owner.

In place of a slide, there is a little telescoping lift out at the end next the roll housing, which same has a part of one side cut out, which may be used to regulate the draft by turning and pulling part way out, allowing the air to come in from the outside, thereby lessening the draft on the roll.

SHOULD INSURE ON STERLING BASIS

At the request of the Secretary of the National Association of Flour Importers, London, England, the Canadian National Millers' Association, Coristine Building, Montreal, has notified its members that flour for export should always be insured for sterling amounts and not have dollar amounts stated on the Insurance Certificates.

It is stated that the practice of insuring in dollars causes British importers unnecessary work, and it is pointed out, in the case of total loss, might cause great confusion

In making the test on a purifier to find out if it is really necessary, be sure it is doing just what it was intended to do, before throwing off the fan belt. If it was not running correctly how could it be judged correctly?

THE PRACTICAL MILLER

CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

FOR SALE—50-barrel Midget Marvel Mill with elevators, beltings, etc., and complete installation for flour mill plant. Also grain grinder, ton per hour capacity. Good reasons given for wanting to dispose. Will sell cheap. Terms given for satisfactory paper. Reply Box 145, Carleton Place, Ont.

SALESMAN AVAILABLE for the Province of Quebec. Excellent connections in Quebec City and district. Has had several years experience and has represented several leading firms. Can furnish best of references. Reply Box 114, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED — By Head Miller, with 20 years practical experience in modern Canadian mills up to 4,000 barrels capacity. Can guarantee best results as to quality and yield on both hard and soft wheat, and maintain mill at highest point of efficiency. At present in charge of a 1,000 barrel plant. Reply Box 85, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

PRACTICAL MILLER with 23 years experience seeks position with plant having daily capacity of 250 barrels or upwards. Can furnish excellent references. Reply Box 82, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—A 50-barrel Midget Marvel Mill, also complete installation of a flour milling plant. In use about three months. Machinery must be moved from actual premises. Good price for cash. Reply Box 103, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Head miller, with twenty years experience in 150 and 275 barrel mills, and still employed, is desirous of making a change. Applicant is 36 years of age, married, and can furnish excellent references. Reply Box 84, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

SALESMAN WANTED for the Province of Quebec. State requirements, experience and salary wanted. Reply Box 102, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

FOR SALE—Plansifter. Size No. 2, with Stratford drive, four breaks, first middlings and sizings. Address Brampton Milling Company, Brampton, Ont.

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W. M. READ & CO.
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SIDNEY SMITH
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Flour, Grain, Feed, Oatmeal and all Cereal products
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WM. GILCHRIST & COMPANY
:: FLOUR ::
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93 Hope Street, GLASGOW
Cable Address: "EGMONT"

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70 Wellington Street - GLASGOW
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WATER POWER FOR SALE.—One thousand horsepower on three leading Canadian railways and Great Lakes waterway. Less than 5 per h.p. per year. Elevator close. Town of five thousand population. Situated in Old Ontario. Reply Box 111, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

POSITION WANTED as head miller in a small or medium sized mill. Applicant has had twenty years' experience. Thirty-seven years of age. Reply Box 110, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FLOUR SALESMAN, speaking English, French and Spanish, seeks connection with milling concern. Reply Box 106, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—Sixty Barrel Stratford flour mill, Allis Rolls, Whitlaw Flour Sifter, Packer, Cockle Machine, etc., all in good running order. Full particulars and price on application to The Pearce Co'y, Ltd., Marmora, Ont.

WANTED TO EXCHANGE—A 20-inch McLachlan Chopper for a 15-inch Moore or Vessot, after April, or will buy. Reply F. H. Robinson, merchant miller, Cookstown, Ont.

SALESMAN, with first-class knowledge of flour and feed trade in the Maritime Provinces is available for engagement. Results guaranteed. Excellent references. Reply Box 113, "Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

SALES EXECUTIVE,

Several years experience as principal in Ontario and western grain business, also feed manufacture and distribution; thorough knowledge of French; conversant with grades, options, premiums, hedges, freights and carrying charges. Wants to connect with first-class grain or milling concern. Reply Box No. 115, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Miller, thirty-seven years of age, is open to take charge of small or medium-sized mill, or to take position as second miller in large plant. Has had twenty years experience. Thoroughly familiar with all branches of milling. Can furnish excellent references. Reply Box 107, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

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THE PRACTICAL MILLER

The Question Box

With a view to making this department one of real service, "Canadian Milling & Grain Journal" cordially invites its readers to send in their problems to The Question Box. There are but very few millers or elevator operators who do not have worries in the proper conduct of their plants. It may be due to lack of experience or inability to trace cause and effect. The logical and sensible thing to do is to ask someone who may possibly know. Often he is not at hand, and still oftener the perplexed miller or elevator operator does not want to show his lack of knowledge. Under these circumstances he can address his inquiry to the craft through this journal. His name will not be divulged if he wishes to remain incognito. Someone is sure to reply who has had similar problems to meet or similar questions to ask. We guarantee to devote all the space necessary to the asking and answering of questions, so do not be backward in sending them in. THE EDITOR.

QUESTION.—What are the causes and effects of excessive "invisible loss" in the milling process. What is understood by the term "killing" as applied to flour? What effect does "dead" flour have in baking considered as a chemical process. How would you judge the result of a baking test? B. M.

ANSWER. — The principal causes of undue evaporative losses, the effects of which are represented by a difference in the weight of given quantities of feed wheat and finished products are:—Heat, condensation and sweating caused by over-rolling; marked variances in milling structure of grists caused by unequal distribution of moisture, thereby necessitating heavy pressure for even granulation; moisture content of feed wheat over adjusted to meet loss, and ineffective exhausts. "Killing" of flour is brought about by over-reaching for length, whereby the starch and gluten granules are squeezed, giving the flour a leaden, lifeless appearance. "Dead" flour in the chemical process of baking primarily effects fermentation, lessening the stability of dough. Taking it that it is the relative proportion of physically damaged to that of sound starch and gluten cells, which obtains at the time water and yeast is added, that governs the rapidity of diastase action, namely,* C12 H22 O11, to C6 H12 O6, and C6 H12 O6 to C2 H5 OH+CO_2, it would appear that, where "dead" flour is concerned, the invertases of yeast which produce this change are too rapidly organized. The excellence of bread is determined by volume of loaf, texture, resiliency, flavor, smell and bloom of crumb, color, and regularity in structure of crust. CHEMIST.

ITALIAN RAW LINSEED OIL IMPORTS

A recent amendment to the Italian Customs Tariff provides that raw linseed oil for industrial purposes, other than the preparation of foodstuffs, may be admitted into Italy at the reduced rate of 10 lire (gold) per 100 kilogs. on compliance with regulations laid down by the Ministry of Finance. Under the revised regulations it is provided that raw linseed oil having an acidity (calculated in oleic acid) of not less than 4 per cent. may be imported at the reduced duty of 10 lire (gold) per 100 kilogs. without being denatured.

The Duster

Magistrate of Irish Court (after a turbulent scene amongst general public)—"The next person that shouts "Down With England, I'll have thrown out into the street."

Prisoner (excitedly)—"Down wid England!"

"And how is Mrs. Ailing?" "Died yesterday, I'm told, sir." "Dear, dear! Gone to join the great majority." "Well, I wouldn't 'zactly say that, sir. She was a good woman, so far as I know."

TO-DAY'S BEST STORY

A man took his wife out to dinner at a hotel restaurant the other night. A short skirt damsel breezed in and, there being nobody else in sight, proceeded to vamp him.

"My dear," grinned the fatuous chump to his wife, "that girl over there is smiling at me."

"That's nothing," replied the better half, "when I first saw you I laughed like hell."

"But why do you keep your clock so fast?" said the inebriated man to the club steward.

"That isn't a clock, sir," said the steward; "that's an electric fan."

Rufus Redd Dogg

"I kain't understand," exclaimed Rufus Redd Dogg, "why sum o' these wall'eye'd aggitators thet er howlin' f'r a compulsory wheat control kin hev th' face t' try an' convince sane thinkin' men thet th' fastenin' o' control on th' country wud be a move thet 'ud be in th' interests o' th' majority.

"Th' majority in this case wud get about th' same kin o' a deal that a bunch o' doctors' meal tickets got 'n th' county horse pistol a while back Ther' wuz a Scotty 'n th' bunch an' when th' doc tol' him thet he wuz headed f'r th' pearly gates an' axed him ef he cud do anythin' f'r him Scotty, he sez, sez he thet he'd like t' hear th' bagpipes oncet more. Th' doc who might f'r all th' world be th' aggricultural committee up t' Ottawa fixed it up an' a braw piper cam' up t' th' room wher' Scotty wuz and paraded up an' down playin' like his lungs wud bust f'r more'n two hours, at th' end o' which Scotty insisted on gettin' up and goin' f'r a walk while th' undertaker wuz attendin' to th' last earthly needs o' th' nine other occupants thet had passed away.

"Applyin' this t' current politics I kin see a compulsory wheat board wud do nine times more damage than anny amout o' good et cud do."

THE MANUFACTURE OF

Grain Elevator Machinery

requires years of experience. We have made the equipment for over 3000 Elevators, which are scattered all over the three Western Provinces.

Our Elevator Service Department

is up-to-date and at your disposal.

The VULCAN IRON WORKS, Limited

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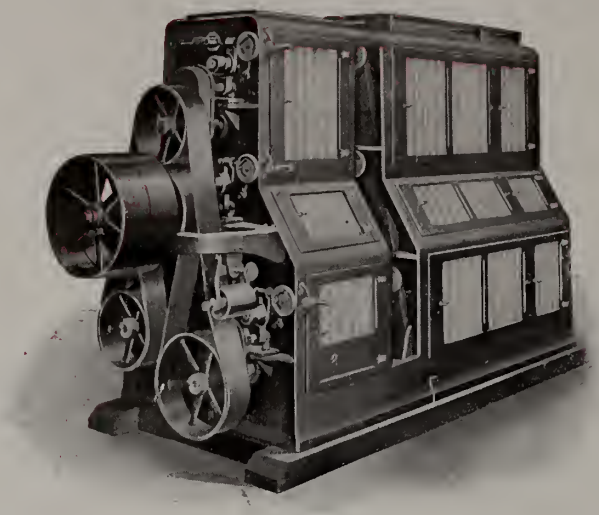
The SUCCESS of the MIDGET MARVEL



POSITIVE DIFFERENTIAL BETWEEN FAST AND SLOW ROLLS.

PATENTED VIBRATING SCALPER SCREEN under first break

SMALL AMOUNT OF POWER AND LABOR required to operate

With the use of gears we maintain a constant and positive differential. Experience has taught us that by use of gears ONLY can this positive differential be maintained.

The VIBRATING ADJUSTABLE SCALPER SCREEN under the first break is an essential feature. It is found exclusively in MIDGET MARVEL MILLS. Its use in Canada is absolutely controlled by us through letters patent.

POWERS REQUIRED:—We recommend 10 H.P. for the 25 Barrel, 15 H.P. for the 50 Barrel size, (Many owners are using less. We recommend, however, some reserve power.)

Built entirely within cast iron frames, with planed joints, the MIDGET MARVEL is solid, substantial, rigid, and operates entirely without vibration.

During the past ten years we have constantly improved the MARVEL. A recent improvement is a Disintegrator which is built in and forms a part of the mill. It is applied between the Second Reduction Rolls and Reel. This gives us a 5 per cent. average increase in yield. This feature, also, is exclusively controlled by us through letters patent. An entirely new ventilating system which eliminates excess moisture, heat and dust, is our latest improvement.

The SUCCESS of the MARVEL FLOUR MILL has been proven by ten years of operation and the 2,500 (round numbers) of these mills now running on the North American Continent.

For further information and descriptive literature address:

Pollard Manufacturing Co., Limited

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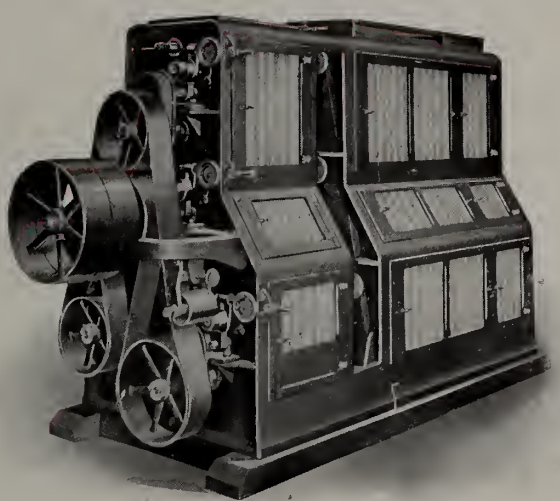
Western Office: 1206 Union Trust Building, Winnipeg, Man.

CANADIAN
Milling & Grain
JOURNAL

VOL. III MONTREAL, JULY 1st, 1922 No. 11

THE YELLOW BOOK

The Midget Marvel Flour Mill



The Mill with which to secure results.

Makes a Flour of superior quality. Combines the efficiency of the very largest Mills with the small capacity required for a local business.

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WINNIPEG

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which are everywhere acknowledged to be

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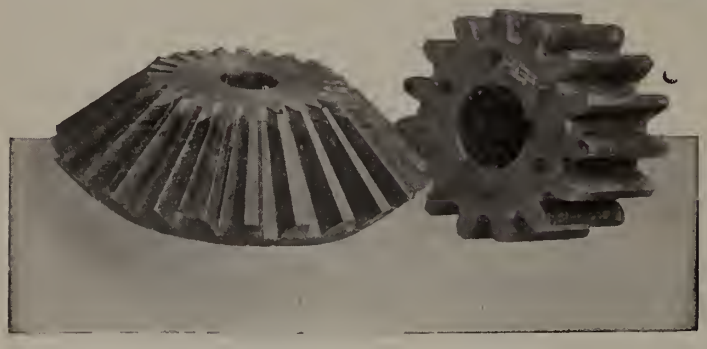
Mills at : MONTREAL, FORT WILLIAM, WINNIPEG, MEDICINE HAT

Daily Capacity, 22,250 Barrels

Silent Pinions

of Celoron or Raw Hide for Quiet and Durable Service



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ALL ROPE FLOUR SACKS
CREAM, WHITE COATED
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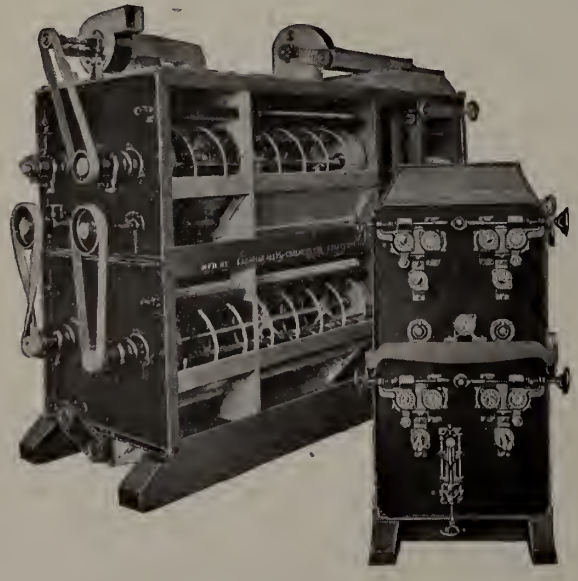
Samples and prices submitted on request.

THE XXth CENTURY FLOUR MILL

is equipped with

29 Self-Aligning Ball Bearings



UNIT flour mills equipped with plain bearings consume a surprising amount of power to overcome friction. This energy is not only lost, but is the source of a host of troubles which impair the efficiency of the mill.

The twenty-nine SKF marked self-aligning ball-bearings used in the above unit mill save most of this wasted power. They prevent heating, sticking and binding which often result from the use of plain bearings—at the same time they eliminate the wear which would cause rolls to get out of tram and necessitate readjustment. They also eliminate lateral or advance roll motion by slackness through worn bearings, thus giving an unvariable, rigid position to the roll.

We would be very glad to send you additional information regarding operation of the XXth Century Mill.

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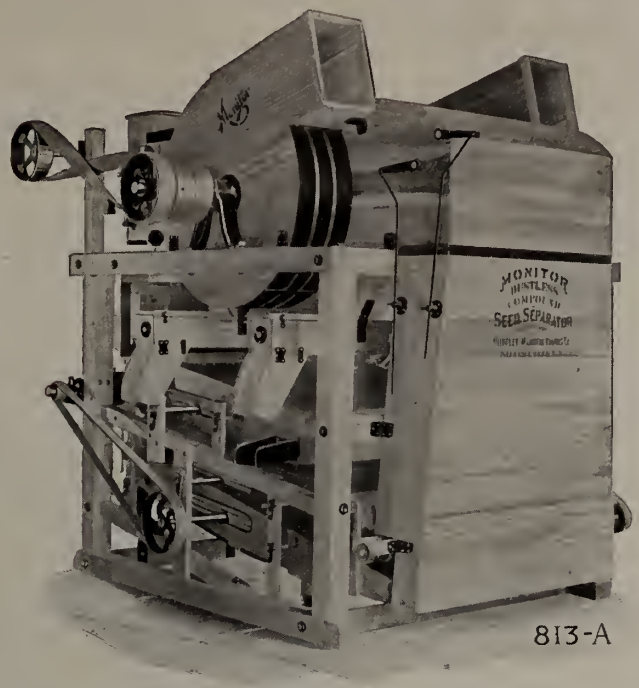

Pays for Itself on the Waste of Other Machines

Any machine that will handle the screenings from another machine and pay for itself in the good stock reclaimed, is a good proposition. That is just what the MONITOR Seed Cleaner has done, more than once.

And, when it is handling virgin seed, it operates with equal discrimination. You will find no waste in the screenings from a MONITOR.

Why not get one in time for the coming crop? It will pay you. It will put your seed inside the Government limits for impurities.

The Monitor
REGISTERED TRADE-MARK

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Special Agents for the Northwest
KIPP-KELLY, Ltd.
WINNIPEG - - MAN.

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WITH A

MOORE GRINDER

YOU GET

MORE ECONOMY

Made in 11 inch and 15 inch

A feature with this Grinder is ——————
the Running Heads cannot get out of tram, which insures uniform grinding; no loss of time and no loss of power

MILLERS, ELEVATOR OWNERS, CHOPPING MILLS, ETC. should ask for more particulars. We can assure you we have a GRINDER you will want.

Send us your REPAIRS, GRINDING, CORRUGATING. Our work is promptly and carefully done.

Various Makes of Refitted Grinders Always in Stock

MOORE BROS.

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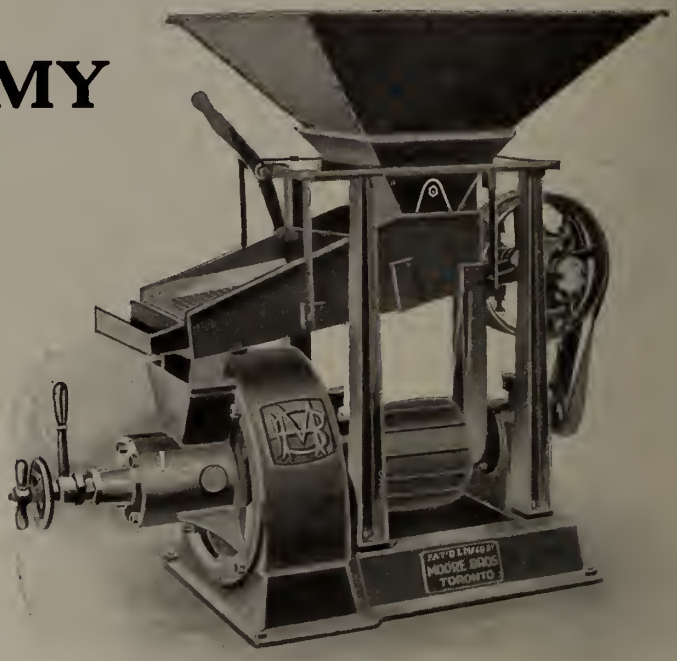
Little Power to Operate



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COSTS LESS PER HOUR

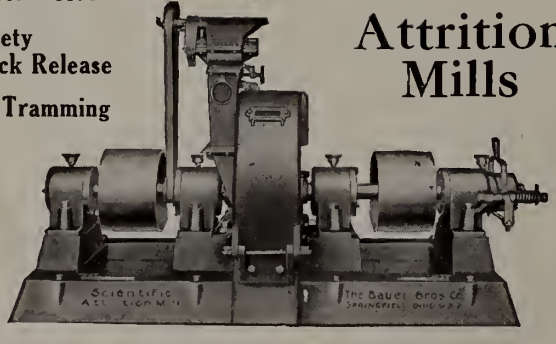
Belt and Motor Drive

Safety quick Release

Self Tramming

Ball-Bearing

Attrition Mills



Bauer Belt-Driven Ball-Bearing Attrition Mill

There are 16 Good Reasons why the BAUER Attrition Mill should have your Consideration. Send for Catalog No. 105 and read the reasons.

Send for List of Canadian Users.

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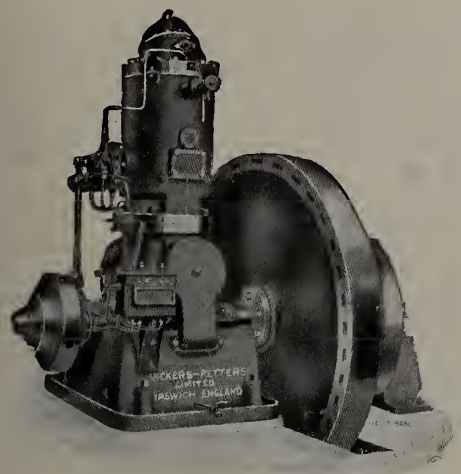

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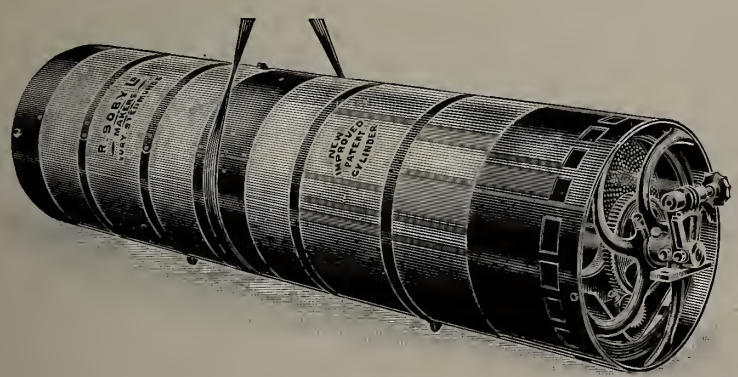

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Regal

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CANADA'S ONLY MILLING AND GRAIN PAPER

The New Control Legislation

AN analysis of the new wheat marketing legislation which has been approved by the House of Commons reveals the basic idea of the measure to be that of a common marketing agency—one central body doing all the buying and all the selling, every grain grower contributing to the common pool and pulling out in the end the product of all this collective co-operation.

At best the system which has been approved can be regarded as nothing more or less than a gamble with the odds against those it is hoped to benefit, for, while collective buying and selling of wheat worked well for grain growers during the war years when the Allies were buying collectively, no such collective buying now exists and Europe as indeed the rest of the world is buying in the open market.

One wide difference between wheat control of a couple of years ago and that which has been adopted by the Parliament at Ottawa is the absolute absence of any federal guarantee against possible loss in operations. The prairie provinces are authorized to establish a wheat marketing board, if it is thought desirable, in which case the present bill affords Dominion facilities for working it. Under the guidance of Hon. Mr. Robb, Minister of Trade and Commerce, himself a miller, the measure would appear to afford every safeguard to the milling interests. The power to prohibit or restrict the export of wheat from the province adopting concurrent legislation was amended so as to require the sanction of the Federal Government and it has also been stipulated in the bill that sales of wheat to millers shall be on the same basis as regards prices and terms of delivery as sales to foreign buyers.

A Glaring Case of Ingratitude

THERE is something radically wrong with our system of pensioning retiring civil servants when on official of the calibre of Dr. C. E. Saunders, B.A., Ph.D., LL.D., Dominion Cerealist and discoverer, among other valuable varieties, of the world-famous Marquis wheat, who has recently resigned his position, is offered only a paltry $900 a year annuity. This striking example of penuriousness was revealed during a recent discussion at Ottawa on the Supplementary estimates. It is to the credit of Hon. Mr. Meighen, leader of the Opposition that he challenged the item, expressing as he did an opinion which will be endorsed by everyone familiar with Dr. Saunders' excellent work that a pension of $2,000 a year would not be excessive.

Besides having proved a source of tremendous wealth Marquis wheat has been, and is, one of Canada's greatest advertisements. Indeed, it has been described as one of the chief means which enabled the Allies to secure victory in the World War. Thanks to a bountiful Providence Canada's crops of wheat during the war years were such that after supplying her own immediate needs she was able to feed millions of those upon whose strength the cause of right depended. Because of its magnificent qualities and its surpassing richness in those chemical constituents so essential to the maintenance of life in man Marquis wheat and its principal product flour is in demand wherever bread is eaten. Yet the genius, as a result of whose knowledge, perseverance and persistence, such a valuable asset was given to the Dominion is voted $75 a month, much less than the salary of a junior clerk.

This is nothing short of disgraceful and steps should at once be taken by the Hon. Mr. Motherwell, Minister of Agriculture and head of Dr. Saunders' late department to rectify what, let it be hoped for the good name of Canadian generosity, has been an oversight. Economy undoubtedly is necessary, but parsimony such as this is inexcusable.

Technical Education for Millers

EVERY miller who has interested himself however superficially, in technical education must realize that a new system of training for those now planning to become the millers of the future is becoming more and more urgently necessary.

There are, of course, all kinds and conditions of men in every trade. There is the strong dominant man, but strength alone does not define the superman. To strength must be added the ability to be an engineer of men.

Associated with the milling business, one frequently comes across men who are regarded as clever, and who, although they lack technical skill, possess the foregoing strength of character and the highest form of organizing power. These men get to the top more by their ability to choose and command than by their own technical knowledge. There are others who cannot delegate responsibility to others, and who must do or supervise directly every important job in the business.

In a few words, the heads of milling concerns have had to judge prospective employees on the basis of past experience and trust until it proves otherwise that they will turn out to be efficient.

How much more satisfactory would it not be for a mill owner in need of help to be able to fill his requirements from the graduates of a milling class or school? Two years ago it was suggested at a convention of the Canadian baking interests that technical classes for those in, and for those who might wish to take up the milling business should be established in connection with the Ontario Agricultural College at Guelph, and although the idea was received with enthusiasm repetition of the plea for technical education in milling has not brought practical consideration of the plan any nearer.

Perhaps the Canadian National Millers' Association which, during its brief existence, has accomplished so much for the industry which it represents, could take a hand in the matter and see what might be done?

Advertising as a Business Safeguard

INSURANCE men aver that the law of averages is as immutable as the law of supply and demand and judging by statistics of the annual number of failures among non-advertising businesses their opinion would appear to carry weight.

According to one of the leading commercial agencies eighty-six per cent. of the business failures recorded during 1921 occurred among firms which did no advertising. In 1920 the average was 84 per cent. and in 1919, 85.6 per cent.

The agency referred to compiles its information from facts not from guess work, and the importance of advertising as a business element must have been regarded as vital, otherwise, it is hardly likely that the expense of maintaining a corps of high-priced agents in all parts of the country to secure the facts upon which their statistics are based would have been incurred.

Millers, grain handlers and mill and elevator builders and equipment houses would do well to reread the foregoing carefully and if their estimates for the present year carry no advertising appropriation to act without delay. If, however, such an advertising appropriation has been provided it should not be forgotten that "Canadian Milling & Grain Journal" as the one publication of it kind in Canada is the only medium read by those whom they wish to reach.

Safeguarding a National Heritage

THERE are usually two periods of fire-hazard in the Canadian forests, in early spring just after the snow disappears, and in midsummer, when the vegetation has begun to get dry. Exceptional seasons vary these periods but the two classes of "spring fires" and "summer fires" remain. Many people understand why the dry, hot period of late summer is likely to be favorable to the starting of forest fires but they think that, after the heavy snowfall of winter, the woods ought to be safe till early summer at least. A little reflection, however, will show why the early spring period is particularly dangerous. In early spring there is often a short period of hot, bright days. The leaves have not yet come out and the sun shines down through the leafless branches directly on the forest floor. The snow disappears as if by magic and the dead twigs and last years leaves become dry as tinder. If a glowing match or cigarette stub is dropped among this material the forest floor is ablaze over a space of many yards in a moment. A few days at this period are always most critical. After the first spring rain the ground vegetation becomes green and damp, and the leaves come out and shade the forest floor. The worst danger is then over, until the hot days of late summer cause the vegetation to dry out, when a danger period ensues which lasts till the first autumn rains. The moral of it all is that Canadians ought always to be careful with fire in the forest and doubly careful during the present danger period.

Bad Results in Milling

If you want a thing done well, pay some miller that knows how and then see that he does it. No man has the right to make a claim that he can do a job, take full pay for it, and then half do that job.

Bad results in a mill may be brought about by a great number of causes, or from some one of a number, and nearly every one of them simmers down to incompetence on the part of the operative. Some of these causes of poor results are dull rolls, rolls out of tram, poor flow, badly blended wheat, badly tempered wheat, bad judgment in deciding just how much feed the mill will carry, poor grinding, poor bolting, poor blending and dressing the flour, poor judge of wheat at the door, poor teeth, poor smell, poor eyesight, poor education, bad temper, red liquor, or white lightning.

It takes a man largely over the average in intelligence to operate a flour mill successfully

The Quintessence of Sarcasm

A NUMBER of milling journals in the United States are losing no opportunity of poking fun at Henry Ford of "flivver" fame for his threatened invasion of the flour milling industry with a product which is to be sold at a flat-rate of 80 or 85 cents per large barrel irrespective of the price of wheat. Some are asking if "Ford's Flour" will have the tensile strength of the chassis of a "Twin-Six Lizzie" while others opine that if the big manufacturer wants to go in for bread making he ought to consider that he has "dough" enough and should give some others a chance.

The Modern Miller, Chicago, however, takes a real hard slam at Henry. In a recent issue we read the following: "Mr. Ford, with all due respect to his success, has the queerest conglomeration of activities of any man in American history.

"In the flour trade a few months and solves the whole question of quality, price, health-giving properties! He has failed, however, to guarantee nutty flavor. He would undoubtedly impart this to the White House if he ever landed there."

On reels it is often found that a scalp cloth on a tail of a reel is tailing over stock that should have passed through and, after testing the tail-over with a hand sieve, it is found that even though using a much finer mesh than is on the reel a better separation is made. When this condition is found, the way to correct the fault is to use a finer mesh cloth and allow more surface for scalping.

EASTERN PROVINCES
MONTREAL
Dubrule Building
Phillips Square
Tel. Plateau 1983

MONTREAL JULY 1ST, 1922

THE MONTREAL MARKETS

Flour.—There has been no improvement to note as yet in the local flour situation, business being still very quiet in all directions owing to the fact that there is no disposition on the part of buyers to operate except for immediate requirements, therefore the volume of business passing is small in spring wheat grades, with car lots of first patents selling at $7.80; second patents at $7.30, and strong bakers at $7.10 per barrel in jute bags, ex-track, less 10c per barrel for spot cash.

The trade in winter wheat flour also continues to be of a limited volume, and the market has been without any new feature to note, prices being steady, with car lots of choice grades being quoted at $6.75 per barrel in second-hand jute bags, ex-track, with smaller quantities selling at $6.85 per barrel ex-store, and winter wheat patents at $6.90 to $7 per barrel, ex-store, in new cotton bags. The demand for white corn flour is slow at $4.50 per barrel, in jute bags, delivered to the trade.

Baled Hay.—The feature of the market for this commodity has been the recent demand that developed from Scotland for supplies owing to the scarcity in that market, and numerous cables have been received from Glasgow within the past few days, with bids as high as £9 per ton of 2,240 lbs., and some business has resulted, the first shipment of 1,999 bales having been made on the SS. Corsican for Glasgow. There has been no change in prices, which are steady, with car lots of good No. 2 timothy quoted at $25 to $26; No. 3 timothy at $23 to $24, and clover and clover mixed hay at $18 to $20 per ton, ex-track.

Millfeed.—There has been no further developments in the market for millfeed, the feeling being still unsettled, with a limited demand for supplies and the market on the whole dull. Car lots of Manitoba bran are quoted at $25.25; shorts at $27.25, and middlings at $29.25 per ton, including bags, ex-track, less 25c per ton for spot cash, with pure barley meal in small lots at $36 to $38; pure grain moullie at $36 to $38, and feed cornmeal at $32 to $33 per ton, including bags, delivered to the trade. The market for rolled oats is dull at $2.90 to $3 per bag of 90 lbs.

Grain.—The local grain market has shown a somewhat stronger tendency of late, activity among foreign buyers especially having been accentuated by a good demand for ocean freights for July shipment. Bids have advanced generally from 3d to 6d per quarter. New York also reports the continuation of a steady export trade especially with the continent, there being a good demand from Germany for wheat. Sales of a number of cargoes to this country are of recent record.

Except for some sales of No. 2 feed grade western oats at an advance of some 3½ to 4 cents over the Winnipeg July option trading in cash grain has been quiet.

WOULD HAVE PRIVATE COMPANY TAKE OVER MERCHANT MARINE AND MAKE QUEBEC BIG GRAIN SHIPPING PORT

FOLLOWING close on the decision of the Quebec Harbor Commission to abolish certain moorage and other charges with a view to securing increased business for their port, comes a suggestion from Mr. T. M. Kirkwood, president of the Kirkwood Steamship Company and a member of the Quebec Board of Trade, that the Government sell its Merchant Marine to an English syndicate which would undertake to build grain elevators at Quebec, Halifax, in England and in Italy, and erect as well a large flour mill at Quebec. The suggestion from Mr. Kirkwood, who is now in England, has been embodied in a letter to the Minister of Marine and Fisheries which reads as follows:

"My Dear Sir,—As a member of the Quebec Board of Trade for some years, I am aware that the Government Merchant Marine steamers and the Transcontinental Railway are losing millions each year, and I also am aware that 80 per cent. of the Canadian western grain is shipped for export via the American ports, instead of via Quebec, and it is no secret that the port of Quebec has not shipped any grain for export for some years, unless it was the overflow of grain that Montreal could not handle.

"I am a shipbuilder and vessel owner. I built ships at Three Rivers for the Imperial Government, and I have operated, and am yet operating, vessels between Quebec and Montreal for some years.

"I have talked with a strong group of financiers here with reference to taking over and operating all your Government Merchant Marine steamers, and they are inclined to form a large company to take over and operate the vessels and to build elevators in Quebec, Halifax, England, France and Italy, and a large flour mill at Quebec, providing you can induce your Government of Quebec or Ottawa to guarantee their interest on their issue of bonds, and will sell the vessels at a fair price, and that your Ottawa Government will lower the rate on grain from Winnipeg to Quebec to 12 cents per bushel, and from Winnipeg to Halifax to 18 cents per bushel, and your Government to hold first mortgage and insurance on the vessels.

"They propose to sell the bonds to the actual buyers of wheat and flour in England, France and Italy, so that the buyers will have their wheat and flour shipped on their own line of steamers. This will, of course, send to Quebec the 80 per cent. tonnage that is now going via American ports for export to England, France and Italy. You can readily understand your port of Quebec will be the headquarters for the large fleet of steamers and will get the 80 per cent. export tonnage, because the grain will have to be shipped over the Transcontinental Railway and the steamers at Quebec, because the bondholders will be the buyers of the wheat, and will order it shipped to Quebec for export, or to be made into flour in their own mill at Quebec. You can understand that if a large flour mill is built at Quebec your Quebec farmers will get cheap bran and shorts for their cattle, this will enrich your province.

"Kindly cable me what you think of the project, at London and Northwestern Hotel, Liverpool.

"Yours sincerely,

(Signed) "T. M. KIRKWOOD."

CANADIAN FLOUR IN SOUTH AFRICA

Owing to the experience the average citizen had last year in using standard Canadian flour, there is no doubt of a more general demand by the wholesale jobbers and large retailers for the counter trade and bakers who are not tied up to millers within the Union and Rhodesia.

There are many centres in these territories and the Belgian country to the north who specialize in good Canadian grades, but the bigger demand is for a quality approximating Canada's No. 3 export grade in 1914.

Recent experience has also proved beneficial in bringing home in a decided way to the South African miller the value of Canadian flour for blending purposes, although in this connection the tendency is towards the purchase of Canadian wheat.

The hold on the import trade held by Australia is one due to price only—in fact Canadian flour, or wheat, would secure the greater portion of the trade if the price were within two shillings of Australia's quotations.

The brand of flour put upon the local market by the South African miller for general purposes, including bakers', is not as good as a number of Canadian grades. It is usually blended with Australian. Bakers who are in a position to purchase from the millers or wholesalers often purchase Canadian third grade, which they blend with their South African and Australian brands, and as a consequence secure not only a better bread, but a bigger batch than they would for the same quantity of S. A. flour.

QUOTATIONS ON BRAN AND SHORTS

The following nominal quotations on bran and shorts have been reported by the Canadian National Millers' Association, Coristine Building, Montreal, to the United States Customs Authorities as the prices of these commodities now in effect. These prices are the net cash prices in bulk, f.o.b., the mill:

	Bran.	Shorts.
Montreal	$22.50	$24.50
Toronto	22.50	24.50
Port Colborne	18.00	20.00
Fort William	16.00	18.00
Keewatin	15.50	17.50
Winnipeg	18.00	20.00
Moose Jaw	12.00	14.00
Calgary	11.00	12.00

OCEAN RATES ON FLOUR SHIPMENTS

The following ocean freight rates (nominal) from New York on shipments of wheat flour, oatmeal and rolled oats in sacks per 100 pounds are effective as of the 1st July, 1922.

	Wheat Flour	Oat-meal.	Rolled Oats.
	(Canadian funds.)		
United Kingdom ports..	20c	20c	32c
	(American funds.)		
Hamburg	18c	18c	40c
Bremen	19c	19c	40c
Rotterdam	19c	19c	37½c
Amsterdam	19c	19c	37½c
Antwerp	19c	19c	37½c
Havre	23c	23c	37½c
Bordeux	23c	23c	37½c
Lisbon	32c	32c	...
Copenhagen	25c	25c	45c
Christiania	25c	25c	35c
Gothenburg	25c	25c	45c
Stockholm	27c	27c	45c
Danzig	25c	25c	45c
Helsingfors	28c	28c	45c
Marseilles	35c	35c	65c
Genoa	35c	35c	65c
Naples	35c	35c	65c
Piraeus	25c	...	...
Salonica	25c	...	...
Smyrna	25c	...	...
Constantinople	25c	...	...
Alexandria	25c	...	...

BUSY SHIPPING SEASON PREDICTED

That the amount of grain shipped to Europe this season from the port of Montreal will rival or even surpass the record shipments of last year, which totalled 138,453,980 bushels, or nearly fifty million bushels more than was shipped from any other port on the Atlantic coast, is indicated by the fact that the volume already sent down the river this season is notably larger than that shipped during the same period in 1921. Contrary to the usual practice at the beginning of the season, there has already been considerable grain activity in the port this year, and a large number of vessels have carried out full cargoes. On one day recently there were thirty-one steamers here from the ocean, either loading or waiting to load grain.

THE CHICAGO MARKETS

The following table compiled from figures furnished by Messrs. Logan & Bryan, members of the Winnipeg Grain Exchange and the Chicago Board of Trade, C P.R. Telegraph Chambers, Montreal, show highest price levels recorded on Chicago Board of Trade from June 13, 1922 to June 26, 1922, inclusive.

	June 13	June 14	June 15	June 16	June 17	June 19	June 20	June 21	June 22	June 23	June 24	June 26
July Wheat	1.14½	1.11¼	1.12¾	1.12⅞	1.11½	1.11⅞	1.11⅜	1.12¾	1.13½	1.15	1.15⅝	1.13⅝
September Wheat	1.13⅝	1.11¼	1.13¼	1.13¾	1.11⅞	1.12⅜	1.11¾	1.13½	1.13⅞	1.15½	1.16¾	1.14¾
December Wheat	1.16	1.14⅛	1.16	1.16⅝	1.15¾	1.16	1.15½	1.16¾	1.17¼	1.18½	1.19½	1.18
July Corn	0.62⅜	0.61	0.62⅜	0.62⅜	0.62	0.62¼	0.61⅞	0.62⅜	0.63	0.63¾	0.64	0.63¼
September Corn	0.65½	0.64⅛	0.65¾	0.65¾	0.65½	0.65⅝	0.65¼	0.65⅞	0.66½	0.67½	0.67¾	0.67
December Corn	0.65⅛	0.64½	0.66¼	0.66	0.65½	0.65½	0.64¾	0.65⅝	0.66½	0.67⅜	0.68	0.67
July Oats	0.36½	0.35½	0.35	0.35⅝	0.34¼	0.34⅜	0.34¼	0.35	0.35¾	0.36¾	0.38¼	0.37⅞
September Oats	0.38⅝	0.37⅝	0.37⅛	0.37⅞	0.36⅜	0.36¾	0.36⅝	0.37½	0.38⅛	0.39¼	0.40¾	0.40¼
December Oats	0.40⅞	0.40⅛	0.39⅞	0.40¾	0.39⅜	0.39⅝	0.39¾	0.40⅛	0.40½	0.41⅝	0.43⅛	0.43⅛
September Barley	0.62	0.61	0.60½	0.59½	0.59¼	0.59¼	0.58	0.58½	0.58½	0.59	0.62	0.62
July Rye	0.90¾	0.88½	0.90⅛	0.90	0.88	0.87¾	0.86¾	0.87	0.87¾	0.89	0.89¼	0.88
September Rye	0.87¾	0.85½	0.87¾	0.87¾	0.87⅛	0.87	0.86	0.87	0.87¾	0.89	0.89¼	0.87¼

ONTARIO

TORONTO

TORONTO JULY 1ST, 1922

THE TORONTO MARKETS

Flour.—There is but little change in the flour export situation from that of two weeks ago. Both in the export and domestic fields trade continues extremely dull. U. K. importers are indifferent buyers at the moment and there appears to be no reasonable explanation of their attitude. They are simply out of the market. As low as thirty-nine shillings has been bid for Manitoba wheat flour but this price has not been accepted by any of the mills on this side as far as could be learned. One or two small lots, it is understood, have been sold, however, at forty shillings and sixpence. Ontario winter wheat flour is being offered more freely now and the price has receded considerably, being now $5.90 to $6.10, Toronto and Montreal freights. Generally speaking the domestic trade is quiet and big consumers, such as the baking establishments continue to buy in only small quantities. The complaint was registered in these columns two weeks ago that the shipping rates charged by the steamship companies on this side were not on the same level as the rates from New York, but this has now been remedied. The rate on flour to U. K. ports is twenty cents instead of twenty-five cents and the change is viewed with a good deal of satisfaction by the milling and flour trade generally.

Millfeeds.—The millfeed situation is much easier because of the abundant pasturage but some dealers are anticipating the possibility of a similar situation as that which existed a year ago. During and following the dry spell last summer prices advanced drastically. Prices of feed stuff jumped almost overnight as reports came in of dried up grass and roots. There was a total advance of about eight dollars. Is history going to repeat itself this summer and will the soft condition of the crops due to rain be a factor in the drying up process should a dry spell come? There is, at the moment a steady demand for white middlings and feed flour, with prices on bran ranging from $24.00 to $25.00 and $26.00 to $27.00 for shorts. White middlings are quoted at from $31 to $32 and feed flour at $1.90. It is interesting to note that during the ran-away market for feed stuffs last year bran prices on June 18 ranged from $24.00 to $26.00. On July 8th prices went up a dollar a ton and on July 28th they went an additional two dollars, to $27.00 and $29.00. On May 13th the price was up to $28.00 and $30.00 and these prices prevailed at those levels until the Fall. At the present time stocks of feed and flour in the mills are not heavy and with the continued excellent new crop reports dealers are a little nervous about stocking up for anything more than immediate requirements. There is a limited demand for mixed cars but the tendency is to confine purchases to practically day-to-day requirements. Export continues dull and there is the same feeling in this market as in the domestic. There are continued reports coming in to Toronto dealers of limited stocks in the United Kingdom and Europe.

Seeds.—The best quality Government graded recleaned seeds are quoted as follows: Alsike, $20.00 per cwt.; red clover, $29.50; late mammoth red clover, $31.50; sweet clover, $9.00; timothy, $11.00; alfalfa, Ont., $31.00 per cwt. Dealers' bids are as follows: Alsike, per bushel, $6.00 to $9.00; red clover, $7.00 to $14.00; sweet clover, $3.00 to $3.25; alfalfa, $10.00 to $16.00; timothy, $2.00 to $3.50.

An interesting view of up-to-date, thriving Kitchener, Ont.

Grain.—Local trade in grain continues very light and even among the big dealers there does not seem to be much cereal selling. Millers continue to maintain their cautious attitude, while the demand for feed grains is light owing to plentiful grass following recent copious rain. The wheat market has been making further recessions under the pressure of the new crop prospects. Local dealers point out that harvesting is now in full swing in many of the winter wheat districts in the States, and while there are some reports of a yield lower than anticipated, there has been no general complaint and the action of the market has indicated that the out-turn is such as to cause some uneasiness among holders. Conservative dealers take the view that the present crop conditions in Canada and the United States have been discounted, though, of course, every day of favorable weather brings the grain nearer its maturity. Firms with export connections report a fair volume of business to Europe, although British purchases of grain are light. Business for domestic account is light and little wheat is moving. An

odd car of oats is being sold to Ontario points but no volume is moving. As the second half of the month draws to a close No. I Northern c. i. f. the bay ports is one and a quarter cents higher, at $1.39¾. Oats are off five-eighths of a cent to one quarter cent higher. No. 2 Manitoba oats were quoted at 66¾ cents; No. 3, C.W. 53¾ cents; American corn, No. 2 yellow, 79½ cents, track, Toronto, prompt shipment; No. 3 yellow 78½ cents.

Legal Notes

Toronto.—It has been announced by H. T. Jamieson, C.A., authorized trustee and receiver of the Canada Cereal and Flour Mills Company, Limited, now in bankruptcy, that out of the proceeds of the liquidation he is arranging to pay to the Montreal Trust Company a sum sufficient to discharge all arrears of bond interest, including the amount accrued up to July 1st, covering a period of sixteen months since the last interest payment, and also 30 per cent. on account of principal, making a total distribution of approximately 38 per cent. It is also stated that further payments on account of interest and principal will be made as the liquidation of the properties proceeds. It is expected that the bonded indebtedness will be discharged in full.

RUSSIA'S REDUCED FLAX ACREAGE

The area under flax in Russia in 1921 was only 15 per cent of that sown in 1914. This extraordinary reduction in the production of flax is attributed to the very low relative price of flax in the home market. Whereas in the lake district (the region round Pskov) it was possible in 1914 to buy a pood of rye with about one-fifth of a pood of flax, in 1919 two poods of flax were required for the same purpose, and in 1920 the position was even worse. The same occurred in other districts, the price of flax having fallen to one-twentieth to one-thirtieth of its pre-war value. This is ascribed chiefly to the prevention of the export of flax.

Toronto.—The brass band, made up of employees of the Canadian Shredded Wheat Company, Niagara Falls, N.Y., made a hit in Toronto recently when they stopped off at the city en route to Montreal. The band, which numbers about a hundred players, is a first class musical organization. After a welcome from Mayor Maguire the band gave a concert in front of the City Hall.

OBITUARY

Toronto.—The Toronto milling and grain trade regretted to learn recently of the death at Seaforth, Ont., of Mr. James Beattie, one of the oldest residents of the town, and a former widely-known grain dealer. The late Mr. Beattie conducted a successful grain-buying business in Seaforth for over half a century, from which he retired a few years ago owing to advancing years. He was prominent in municipal and lodge circles in Seaforth.

The Modern Sophocles

CARLYLE said: "Blessed is he who has found his work; let him ask no other blessedness. He has a work—a life's purpose; he has found it and will follow it."

In this age of speed and increased activity there is a great demand for men and women who are self-reliant and capable of assuming responsibility. Happy is the youth who finds the place which his dreams have pictured. If he does not fill that place, he will not fill any to the satisfaction of himself or others. The country is full of men who are out of place, disappointed, soured, ruined, out of office, out of money, out of credit, out of courage, out at elbows, out in the cold.

One of the most important factors in winning promotion is the proper use of time. The man is yet unborn who rightly measures and fully realizes the value of an hour. He who can utilize his time to the best advantage will surely make progress. Waste of time is waste of energy. The way we use our spare moments reveals our character.

LATE HEDLEY SHAW LEFT BIG ESTATE

Toronto.—The will of the late Mr. Hedley Shaw, who at the time of his death was managing director of the Maple Leaf Milling Co., Ltd., disposes of an estate of $1,086,881, including $448,260 in bonds, $319,929 in stocks, $212,257 in deposit with the Maple Leaf Company, $6,538 in mortgages, $16,631 in book debts and promissory notes and about $43,000 in insurance. Real estate includes $8,250 in Saskatoon, $2,100 in Winnipeg and $750 in New Westminster and Edmonton. Legacies include $10,000 to Victoria College and $5,000 to Toronto Infants Home.

Late Foreign News

JUGO-SLAVIA—Favorable reports on the growing crops have been received. The warm, dry weather which has been experienced of late has caused a rapid development of the plant. Rye and barley are mostly in ear, while wheat, which is over one and a half feet high, is a nice dark, strong color. An extensive acreage has been planted with maize; the young seedlings are of vigorous growth, but want more moisture.

EGYPT—There has recently been an increase in the import of French flour into Egypt. Before the war, the majority of the flour which Egypt drew from abroad came from France, but circumstances caused the replacement of the French product by those of Australia, America, and Argentina. Although Egypt produces a good deal of wheat she is not able to turn it into flour, as the mills are few and primitive. It will be many years before any very considerable proportion of her needs can be satisfied by the home industry. The Food Bureau, which had large stocks of flour on hand, has now disposed of these, so that a marked increase in imports can be looked for.

WESTERN PROVINCES

WINNIPEG

WINNIPEG JULY 1ST. 1922

THE WINNIPEG MARKETS

Flour.—Local milling interests report no improvement in the demand for flour in the domestic markets, where sales are scattered and only for small amounts, while export trade appears to have reached the vanishing point, little or no business having been worked recently. The declining prices of wheat have brought no further reductions in flour prices, which remain unchanged from last report. Present quotations are: top patent spring wheat flour $7.50 bbl., seconds $6.90, first clears $6.30, jute, mixed cars, 30-day terms, delivered at any point between Fort William and the western boundary of Manitoba. In 98-lb. cotton bags, prices are 20c over the jute basis. Saskatchewan points take 10c under these prices, and from eastern Alberta to the Pacific Coast values rise progressively to $7.80 for top patents at Vancouver and like points. Vancouver Island takes $7.85 for top patents, and Prince Rupert $8.00.

Millfeed.—Bran and shorts are in excellent demand. Trade is brisk, bringing all available stocks on the market. There is no change in prices of either commodity. Bran is selling at $22 per ton, and shorts at $24, in bags, delivered, Winnipeg territory.

Oatmeal.—Business in rolled oats and oatmeal is seemingly down to the minimum. In line with other grains, millers are not hopeful of any brighter aspect in this market for some time. While trade is listless, no reductions have taken effect in prices. Rolled oats are being offered at $2.70 to $2.80 in 80-lb. cotton bags, and oatmeal at $3.35 in 98-lb. cotton bags, delivered, Winnipeg territory.

Rye Flour.—The market, both domestic and export, for rye products is somewhat disappointing, as it is impossible to work up a connection. Prices remain at same level as a week ago. Quotations: best patent flour $7 bbl. in 98-lb. bags, medium $6, dark $5, and rye meal $5, delivered, Winnipeg territory.

Linseed Products.—The demand for these goods continues to show marked improvement, and the market is considerably more active than it has been for some time. The local mills are reported to have good supplies on hand. Oil cake is quoted at $50 per ton and meal at $52, in bags, mill points. Raw oil is quoted at $1.00 per gallon and boiled oil at $1.03.

THE GRAIN MARKETS

Although the general situation continues to be bearish, the wheat market did not register such heavy declines last week as it did during the two preceding weeks, July wheat closing on Monday, June 19, at $1.22½, only ½c under the previous Monday's close. At the same time, however, this is a decline of 2½c from the week's highest closing price, the July future closing on June 14 at $1.25. Closing prices have been somewhat erratic, the closing quotations of July wheat for the week commencing June 12 being: $1.23, $1.22⅝, $1.25, $1.23⅜, $1.24⅛, $1.24 and $1.22½.

The chief factor influencing both Canadian and American markets has been the weather conditions over American winter and spring wheat and Canadian spring wheat areas. These conditions can, generally speaking, be called favorable, although at times there have been complaints from American areas of excessive heat, which, however, was relieved by cooler weather with showers.

For the past three weeks, following the abnormal May position, the market has suffered very severe declines. The weight of old crop supplied and favorable weather conditions, coupled with only a moderate export and domestic demand, has been too heavy a burden for the market to carry. On the Chicago market many traders bought heavily in the act of short covering when reports of damaged crops from excessive heat were received, and this accounts for the advance on June 14. Almost immediately, however, cooler weather with showers changed the situation entirely and the market was flooded with offerings of wheat that had been bought for "covering" purposes, and broke under the liquidation, July wheat closing 1⅝c lower on June 15.

The possibility of the formation of a wheat board has, according to prominent brokers, been a restriction against new business in the distant futures. There has already been considerable new crop business done by exporters, and it is only natural that while there is any possibility of open market privileges coming to an end in the form of a wheat board, that they will be backward in entering into any contracts in the distant future position wheat. This situation, coupled with a "waiting attitude" for new weather developments, has caused the market to be more or less dull.

Light offerings, caused chiefly by farmers remaining undisturbed in their holding attitude, has been against any enlarged cash business, although at times there has been a more or less good enquiry from exporters and domestic millers. On Monday, a heavy decline in sterling exchange was against new business with the continent, and the export market became very dull.

WELL-KNOWN FLOUR MILL EXECUTIVE RETIRES FROM ACTIVE SERVICE

Winnipeg.—This city's most widely known business man is shortly to retire from active work in the person of Mr. W. A. Matheson, who for the past nine years has been general manager of the Lake of the Woods Milling Co.

Mr. Matheson has been connected with the milling business in Western Canada since 1884, first with the Ogilvie Milling Co., and 33 years ago he joined the staff of his present company, beginning as an operator in an elevator and gradually working up until nine years ago when he became Western General Manager, succeeding G. V. Hastings. It is Mr. Matheson's intention to take a well-earned rest, but will still remain a director of the company. Mr. Matheson has seen the plant of the Lake of the Woods Milling Co. grow from one mill of 800-barrel capacity and five elevators, to four large mills, all

in Western Canada, with a combined capacity of about 14,000-barrel capacity and 110 elevators.

Mr. Matheson's successor, it has been announced, will be Mr. N. Breen, who has been in charge of the flour department of the company for a number of years. Mr. Matheson's retirement takes effect on July 15. His many friends throughout the country will wish him many years of well-earned leisure.

CHICAGO BOARD OF TRADE HAS ADOPTED NEW FUTURE TRADING RULE

Chicago. — A new rule requiring non-member corporations to give written authorization to commission houses empowering non-member corporation officers or employees to make contracts for future delivery of grain for corporation account before such orders will be accepted has been adopted by the Chicago Board of Trade. The rule protects non-member corporations and grain exchange members against abuses arising from unauthorized trading.

Besides the usual confirmation, written notice of each transaction will "be mailed to some executive officer of the corporation other than the manager or officer giving the order." Board of Trade officers said the rule further strengthens the position of the exchanges in providing mutual protection for all those who transact business on the exchange.

The rule was drawn up and submitted for action by the new Joint Conference Committee on Grain Exchange Practices, whose purpose is to iron out differences between producers and handlers of grain and to consider in an informal manner complaints that may arise. The committee was created at the suggestion of Mr. Joseph P. Griffin, then president of the Chicago Board of Trade, at a conference under auspices of the Department of Agriculture.

GRAIN BUYERS WANT PROBE NOW

Regina.—A group of grain buyers in Saskatchewan, has asked the Board of Grain Commissioners for Canada for a special investigation of charges they have to make regarding alleged dishonest practices of certain elevator companies. The board has replied that it stands ready to make such inquiry whenever the necessary statutory declaration of charges is in its possession.

TRADE OPPORTUNITIES

With a view to assisting the Canadian milling trade in the development of a permanent and profitable export business, "Canadian Milling & Grain Journal" publishes in each issue a selected list of trade opportunities, the investigation of which should prove of value. "Canadian Milling & Grain Journal" is taking special pains to ascertain the reliability of each opportunity presented and will gladly furnish any further information regarding them that may be desired.

THE EDITOR.

No. 267.—Mr. T. W. M. Deane, Bridgetown, Barbados, British West Indies, who is well-known in the trade and who can furnish excellent references, wishes to secure a Canadian connection for general feed-stuffs, including oats, hay, bran, pollard, and middlings.

No. 268.—Messrs. Moorhead, Sons & Company, 104 Brunswick St., Glasgow, Scotland, which maintains distributing branches and agencies in the principal centres of the United Kingdom, can handle consignments from Canadian exporters. Flour, oatmeal, and cereal foods are particularly required.

FLOUR MILLING IN LITHUANIA.

Kovno.—"Lithuania, being purely an agricultural country and producing wheat and other cereals in large quantities, is interested in exporting and not in importing flour. There are in the country 34 flour mills using steam power. In addition there are numerous windmills, which are important only in supplying local demand. The product is an unbleached flour made from wheat and rye.

"It is estimated that about 40 per cent. of the millowners in Lithuania are Lithuanian-Americans who, returning from the United States, made their investment in the milling industry at a time when the mark had a greater value than at present, but whose financial condition, owing to the heavy fall of the mark, has suffered greatly.

"During the first half of the year 1921, flour to the value of a little over 4,000,000 marks was exported to Germany. No American flour has been imported since 1918, and at that time it was received as a gift."

THE WESTERN MARKETS

The following report furnished by Messrs. Baird and Botterell, 103 Grain Exchange, Winnipeg, shows daily highest price levels from June 13, 1922, to June 26, 1922, inclusive.

	June 13	June 14	June 15	June 16	June 17	June 19	June 20	June 21	June 22	June 23	June 24	June 26
July Wheat	1.26 1/8	1.23	1.25 1/4	1.26 1/2	1.24 1/8	1.24 1/2	1.24	1.25	1.26	1.27 3/4	1.28 5/8	1.26 5/8
October Wheat	1.18	1.15 7/8	1.18	1.19 1/4	1.16 3/4	1.17	1.17 3/8	1.18 5/8	1.18 7/8	1.20 3/8	1.21	1.19 3/8
December Wheat	1.14 5/8	1.13	1.15	1.16	1.14	1.14 3/4	1.14	1.16 1/8	1.16 3/8	1.18 1/8	1.18 7/8	1.17 1/4
July Wlax	2.22	2.15 1/2	2.21	2.32	2.41	2.40 1/2	2.35 1/4	2.38	2.38	2.38 1/2	2.38 3/4	2.41 1/4
October Flax	2.10 1/2	2.03	2.09	2.13 1/2	2.17 1/8	2.21	2.14	2.16	2.15 3/4	2.18	2.19	2.20
October Rye	0.83	0.88 1/2	0.90 3/4	0.91	0.83	0.82 1/2	0.81 5/8	0.83	0.83	0.84 5/8	0.89 1/2	0.88 1/8
July Barley	0.66	0.61 1/2	0.64 3/4	0.65	0.64 1/2	0.64 1/2	0.64	0.65	0.64 7/8	0.65 3/4	0.66 5/8	0.66 3/8
October Barley	0.60 3/4	0.64 3/4	0.65 5/8	0.65 5/8	0.60 1/2	0.60 1/2	0.60 1/2	0.61 3/8	0.61 3/4	0.63 1/8	0.64 3/4	0.63 1/8
December Barley	0.59	0.59 3/4	0.60 1/2	0.61 5/8	0.61 1/2	0.61 1/2	0.61 1/4	0.61 1/4	0.61 1/4	0.61 1/4	0.61 1/4	0.61 1/4
July Oats	0.52	0.51 5/8	0.52 1/2	0.52 7/8	0.51 3/4	0.51 1/2	0.51 3/8	0.51 1/8	0.50 7/8	0.51 1/4	0.52 5/8	0.51 5/8
October Oats	0.46 3/8	0.45 7/8	0.46 1/8	0.46 1/2	0.45	0.45 3/8	0.45 1/4	0.45 7/8	0.45 1/8	0.47 1/4	0.48 3/8	0.47 7/8
December Oats	0.45 1/8	0.44 3/8	0.44 1/2	0.44 5/8	0.43 5/8	0.44	0.43 3/4	0.44 1/8	0.44 3/8	0.45 5/8	0.46 3/4	0.46 3/8

Foreign Flour and Grain News

DESPITE a recent general reduction of 20 cents a barrel in all grades of spring wheat flour, business both export and domestic, remains quiet with prospects unpromising. Wholesale and retail grocers are not showing any great activity, this branch of the trade buying flour only as required in small quantities. The stocks of flour held by the grocery trade are said to be sufficient to carry them for some weeks.

The baking trade also appears to be buying but lightly confining purchases to immediate needs. Business with the bulk of the baking trade is not active, the reason apparently being that the bakers are awaiting the movement of the new crop and feel that it would be unwise to stock up heavily just at present. The fact that there is so little large buying strengthens the belief that when improved conditions ultimately come they will fully compensate for the present slack period.

The winter wheat market has been quiet with no change in prices from those recorded two weeks ago. Choice grades are quoted in Montreal at $6.75 per barrel in second hand jute bags, ex-track, with broken lots offering at $6.85, and patents $6.90 to $7 per barrel.

There appears to have been some strengthening in the grain market in the demand from overseas buyers for Manitoba spring wheat, this being due to an advance in cables of from 3d. to 6d. per quarter, while the improving market for sterling exchange also had good effect. The aggregate of the orders which are being filled daily are not large. Inquiries from American exporters for hard winter wheat and rye through Montreal brokers representing Chicago houses continue fair for first half this month, and October shipment. Cash grain prices have been more or less steady.

RUSSIA.—There has been no additional crop news since last report. Famine conditions are said to have improved in East Russia, but in the Ukraine the situation is desperate. German papers say another drought is feared.

ROUMANIA.—Excellent weather conditions continue throughout the country, and favorable reports of the crops are being received. The plants are of robust growth and many fields of oats are 5/6 inches high.

INDIA.—The outturn of rabi grain crops in Bengal is estimated at 77 per cent. of normal, against 81 per cent. last year. The final Government estimate of the wheat crop in the Bombay Presidency, including Sind and Native States, is 494,000 tons, compared with 567,000 tons, the second estimate and 214,000 tons the final of last year.

ARGENTINA.—The fine, dry weather experienced during the past week has been very favorable for the conditioning of maize. Growers are taking full advantage of prevailing weather conditions to seed their wheat, oats and linseed crops, as the recent rains have put the ground in good condition for this work.

AUSTRALIA—A cable recently received from Sydney said that recent rains have been confined to coastal districts, which are not large wheat growers. Other reports have given a favorable account of seeding conditions.

FRANCE—Warm, sunny weather has again been prevalent throughout the country, and generally speaking has given rise to favorable comment. In the north, however, where the very important wheat growing areas are situated, growers are complaining of lack of moisture, abnormal weed growth, and insect ravages. Rye is now in flower, while of the secondary cereals winter barley has, perhaps, the most favorable appearance.

GERMANY—Warm, sunny weather, with occasional rains, has been experienced. All crops are now growing well, and hopes are entertained that the harvest will not be unduly delayed. The latest official report mentions an appreciable improvement in the condition of all crops. Spring cereals, however, have a better appearance than the winter grain.

ITALY—While the wheat crop is now growing well, it is pointed out that the damage done to the plant during the recent period of unfavorable weather has not been made good, and an abundant crop cannot be hoped for.

AUSTRIA—State control ended in Austria on April 29, since which date there has been no restriction whatever on free dealings in grain, flour, and bread, other than that contained in anti-profiteering legislation. With the abolition of the bread tickets, anyone can buy as much bread as he likes at any price the baker charges. The only way in which the State is concerned in the trade on a permanent basis is in its participation in the Getreide A.-G., a company formed for the purpose of maintaining a standing reserve of 100,000 tons of bread cereals, most of which is already in Austria.

CHINA—Advices from Shanghai anticipate that the new wheat crop in China will not be very heavy. Some estimates place it at an even lower amount than the poor yield of last year.

GREAT BRITAIN — The demand for home-milled flour continues very quiet, the recent declines having had little, if any, effect in stimulating business. As regards foreign, there is very little doing in forward positions. Importers in some instances claim a moderate trade in arrived Australian, but American and Canadian meet a very slow enquiry.

The market for English wheat as compared with that of five weeks ago is comparatively inactive and distinctly easier, values having declined 1s. (0.22) to 2s. 6d. (0.55). Mark Lane has for the most part ruled slow, and the quantity on offer on country exchanges has been materially reduced, but the milling demand is poor, and quotations range from 55s. ($11.44) to 60s. ($13.20) in the provinces, and at Mark Lane the price is nominal at about 56s. ($11.66). The downward tendency is due to the exceptional progress which the crop has made during the last few weeks, and the reserve of millers, owing to the ample stocks at their command. It is now taken for granted that the British crop was underestimated, and the opinion obtains that we need not apprehend any real scarcity of grist before the new crop is available.

The Elevator Operator

DOMINION AND UNITED STATES WILL CO-OPERATE TO ELIMINATE DUST EXPLOSION RISKS IN BOTH COUNTRIES

The problem of dust explosions in flour mills and other industrial establishments is now exciting serious attention for the first time. The Canadian Government has undertaken to co-operate with the United States authorities in the matter, and some of the states have individually taken it up.

Public interest in the subject may be said to have been brought to a focus by the great disaster at South Chicago, where the Northwestern Elevator, the largest in the world, was blown up with a loss of six lives and more than $3,000,000. It was built of concrete, with a capacity of 10,000,000 bushels, and was deemed so safe that the owners refused to insure the structure. Yet a mere spark communicated to wheat dust reduced it in a moment to a heap of ruins.

Until very recently it was not realized that an explosion could result from such a cause. But it is now known that any kind of dust, if composed of combustible material, may, if distributed through air, be as dangerous as so much gunpowder. Dynamite in large quantities could not have more completely wrecked the elevator in South Chicago.

Wheat dust, sugar dust, the dust of corn-grinding mills, cork dust, soap-powder dust, malt dust, even metal dusts, are equally dangerous under similar conditions. Not long ago a candy factory in Boston was blown up by the accidental ignition of powdered sugar used for coating marshmallows. Ignitible dust of any kind afloat in the air, its particles in intimate contact with oxygen, burns, if set on fire, with such rapidity as to engender instantaneously a huge volume of gas, the expansion of which in a confined space will rend the strongest walls asunder.

The wheat bins of the South Chicago elevator were built of reinforced concrete, cylindrical in form, each of them ninety-five feet high and thirty-three feet in diameter. The explosion exerted its main force underneath, lifting forty of them bodily into the air and totally wrecking eighteen.

The last twelve dust explosions in Canada and the United States killed 154 persons, injured 200, and caused a money loss of $16,000,000.

The present method of handling grain at elevators is exceedingly dangerous. It is important that dust-collecting apparatus—fans, and pipes to suck it up and remove it—should be installed at all places where the dust, created by attrition of the grain, is liable to be "kicked-up."

PREDICT NEW CHEQUE TAX WILL ADVERSELY AFFECT GRAIN TRADE

Winnipeg.—The stamp tax on cheques in its final form is regarded as bearing very heavily on the grain trade. The bulk of the cheque transactions are under the $5,000 mark, and it will be chiefly in the export section that the limit of two-dollar stamp will give relief. It is estimated that on the basis of the 1919 crop the tax in its original form would cost the Grain Exchange clearing house $160,000. Consequently, the clearing house will make some radical changes in the accounting system to avoid the tax. That is being worked out now in anticipation of the date of effect being deferred to August 1. Under the system in vogue daily settlement has been the fixed rule for all traders through the clearing house. The new arrangement will plan for issue of credits and longer time between settlements. This will involve more risk, but the stamp tax is too formidable and will be avoided by fewer cheques.

Must Pay Tax Four Times

In the business relations between the elevator companies, head office and purchasing agents in the line elevators, the stamp tax has to be paid four times in the settlement, as now in use. To start operations, the agent makes a draft on the company, which carries the stamps. The company pays that draft by cheque, which again bears the stamps. A note is given the bank daily to cover the overdraft, which again must bear stamps, and in the settlement of that overdraft the company's cheque must carry the stamps required. The tax is looked upon as a tax on trade and not on income.

The members of the Grain Exchange are making slight comment on the Wheat Board legislation, and are waiting for more light which will come with the text of the bill and the amendment and from the legal interpretation of the proposed law. Government supervision and competition in the grain trade are considered by the trade to offer the best solution for any alleged ills or failure in operation of the existing system.

DECLINE IN GRAIN STOCKS OF WORLD

Ottawa.—World wheat stocks to-day are lower than for several years, according to an analysis of the situation, which has been issued by the Department of Trade and Commerce.

Both Argentina and Australia, the Department explains, have considerably less wheat than last year, the United States carry-over will be light and only Canada has considerable stocks on hand. A larger demand than last year it was declared was indicated by the upward trend of European consumption, while the prospects are for a smaller crop.

LESLIE C. BRINE

Grain Trimming and Bagging

TELEPHONE St. Louis 6397F MONTREAL TELEPHONE St. Louis 6397F

The Elevator Operator

THE ADVANTAGES OF CONCRETE IN GRAIN ELEVATOR CONSTRUCTION

Hardly a day passes that a wooden elevator is not burned somewhere in the country. If the reported loss was large, we can be sure that grain was destroyed, that is, food was destroyed.

Why store and handle grain in burnable structures when the investment in a non-burnable structure will pay good dividends on the additional sum required over the cost of the wooden elevator or storage plant. The price of lumber for an elevator has greatly increased and deliveries of shipments are very slow.

Depreciation on an elevator built entirely of concrete is small while a 5% per year depreciation on the wood elevator is a conservative figure. The depreciation and upkeep of the machinery is much less in a concrete building owing to the solidity of the structural supports and the absence of vibration.

The safety afforded the business is a matter which each owner can decide for himself. The day is past when the elevator can be replaced in sixty days. It is exceptional to secure the delivery of lumber within that time. In past years almost immediate shipment could be depended upon.

There are plenty of uses for our much needed lumber supplies other than for the construction of elevators which are peculiarly liable to combustion.

Reinforced Concrete's Flexibility

Reinforced concrete has proved to be the most flexible of all materials in the construction of grain elevators and storage tanks. It is claimed that 99% of the larger grain elevators and storage at the terminals and possibly 90% of all the fireproof country elevators are now being built of reinforced concrete. In certain parts of the structure, such as the exterior and partition wall of machinery floors brick or tile may be used. But where grain, earth or water pressures are to be resisted, reinforced co crete is the logical material.

Reinforced concrete can be used more economically in the construction of grain elevators and storage tanks, as the use of lumber for forms in these structures is a minimum and such lumber is available in any yard. The materials for the concrete structure can be assembled in less time than for the wooden elevator. No doubt before the building season is over there will be a great scarcity in building materials of all kinds, as the outlook for general building the country over seems to point to a bigger year than last year.

A recent fire in a concrete elevator demonstrated the fire resisting qualities of concrete. On the first floor of this elevator were several attrition mills with wooden feed legs, sacking spouts, reels and conveyor boxes. The fire burned out the installation in one day and the only damage was a slight spoiling of the concrete over an area of a few feet square, to a depth of less than ½ inch, resulting in no injury to the strength of the bin bottom slab.

If, however, the bin bottom slab had been carried on exposed steel beams, the heat developed would have been sufficient to cause the steel to sag an very possibly collapse under the load.

WANT TERMINAL ELEVATOR IN ONTARIO

Ottawa.—In the House of Commons recently Mr. T. L. Church, Conservative member for North Toronto, made a plea for the establishment of a terminal elevator in Ontario. Ontario was a large grain producing province he asserted, and should be given facilities for storing grain.

Hon. J. A. Robb, Minister of Trade and Commerce, asked Mr Church where he wanted the elevator located.

Mr. Church replied that he did not care where it was located as long as western Ontario got some relief.

Mr. Robb said he would be pleased to give the matter consideration.

Concrete Elevator of the Buenos Aires Elevator Co., at Buenos Aires, S.A.

YOUR SUBSCRIPTION WILL HELP MAKE CANADIAN MILLING & GRAIN JOURNAL AN EFFICIENT FACTOR IN YOUR INDUSTRY.

THIS JOURNAL IS PUBLISHED TO BENEFIT THE MAN WHOSE CAPITAL IS INVESTED IN MILLING OR GRAIN HANDLING. SEND US YOUR NAME AND ADDRESS WITH $3.00 AND GET THE JOURNAL FOR A YEAR.

An Expert Milling Chemist's Views on Flour Bleaching

Synopsis of an address delivered before the Association of Operative Millers by Mr. Henry E. Weaver, Member American Association of Cereal Chemists and Head Chemist for Larabee Flour Mills, St. Joseph, Mo.

The bleaching of flour in the United States is of comparatively recent origin, dating back only to the Ilsop patents issued in 1904. Among the claims made for the beneficial effects of this process upon the quality of flour was an increase in protein and a decrease in ash content.

So far as I know, all legal action has concerned itself only with flour bleached by the use of nitrous oxide or nitrogen peroxide as the active agent.

There are in the United States to-day three different reagents used for the bleaching of flour as follows: nitrogen peroxide, chlorine and nitrogen trichloride. All of these are in gaseous form and all applied to flour in a similar way, that is, by bringing a current of the gas into contact with flour in one of several types of agitators. I am going to spend no time in describing in detail how the gas is applied to the flour, for this is a process with which you are all familiar.

We will start with the process in which nitrogen peroxide is the active agent. This gas serves to whiten flour, destroying some of the yellow coloring matter. The percentage of ash, moisture, protein, water soluble protein, gliadin, and acidity are not effected. Neither is there any collodial change effected in the proteins according to the viscosity determination made of flour untreated and on flour treated with nitrogen peroxide.

The hydrogen ion concentration is increased slightly, showing some slight oxidation.

The fermenting period of flour treated with nitrogen peroxide is the same as that of flour with no treatment.

Comparing loaves of bread made from flour treated with nitrogen peroxide and that made from flour which has had no treatment, we find the bread made from the treated flour to be the whiter, we have found no difference in the volume or texture. We have been unable to confirm the claim that treatment with nitrogen peroxide gas acts the same as natural aging, excepting the item of color.

The next reagent to be considered is chlorine. Treating flour with chlorine effects very definite chemical changes, as follows: An increase in acidity, an increase in the hydrogen ion concentration, an increase in the percentage of soluble proteins, and a slight but consistent decrease in the percentage of gliadin. The collodial condition of the proteins is also effected as is shown by viscosity determinations, using both water and dilute acids for making the dilute dough solutions used in this determination. This condition applies more particularly to the higher grades of flour, patent and straights, it is entirely absent in the low grade.

Chlorine attacks the coloring matter in flour and destroys some of the yellow coloring matter.

In baking it is noticeable that flours treated with chlorine require less fermentation to ripen the dough, than do flours which have had no treatment.

Chlorine Affects Bread Color

Breads baked from flour which has been treated with chlorine shows a whiter color and a slightly better texture than that baked from flour which has had no treatment. When the treatment is applied to the lower grades of flour many times one finds a larger volume in the bread baked from the treated flour than from that baked from the untreated flour. This, however, is often caused because the untreated flours are not given sufficient fermentation period.

The difference is more one of fermentation period than it is of volume.

The next system of flour bleaching used in the United States is of very recent origin; nitrogen trichloride is the reagent used. I have had very limited experience with the use of this reagent as a bleaching agent for flours, in fact I have never as yet seen the effects of this reagent as actually applied in a flour mill.

I have, however, forwarded samples of patent, straight clear and low grade flour to the manufacturer and have investigated thoroughly the changes between the treated and untreated flours, in chemical composition, physical changes during fermentation, and I have noted the difference in the appearance of bread made from the treated and untreated flours.

The nitrogen trichloride gas treatment does not effect the chemical composition of the flour in any manner, according to determinations made, which includes moisture, ash, protein, water, soluble protein, gliadin, acidity and hydrogen ion concentration, nor does it effect the colloidal condition of the proteins as shown by a series of viscosity determinations.

Texture Slightly Affected

The viscosity determinations made on the fermenting dough, however, did show a slight but consistent decrease for the treated flour, probably enough to affect the texture.

As a bleaching agent applied to flour, nitrogen trichloride is very strong, and it is possible to remove so much of the coloring matter in flour, that the gasoline color test will give no positive test at all.

The fermentation period of doughs made from flour treated with nitrogen trichloride is the same as that of doughs made from flour which has had no treatment.

The bread baked from the treated flour shows no increase in volume over that made from flour with no treatment; it does, however, show very much whiter than that made from untreated flour; it has a better texture, and a beautiful bloom.

The taking up of slack belts requires some judgment, because there is always the danger of an overtight one through miscalculation of the amount to be taken out. Practice, coupled with a determination to learn to judge just how much each individual belt needs taking up, will in time, rally to the belt adjusters assistance.

The Proper Lubrication of Silent Chain Drive Systems

IN considering the installation of a new transmission system or replacing an existing one chain drives would appear to possess many qualities well worth attention. Not only is there a chain drive system adaptable to any class of work whether it be in a mill or grain elevator, or any other kind of industrial establishment, but there is also the fact that chain drives live up in every way to the claims advanced for them by the manufacturers of them. Furthermore, chain drives transmit a maximum of the motor's power, this clearly indicating that there is no slipping and a minimum loss of power in transmission.

Second only in importance to their proper installation in flour mills or elevators is the correct lubrication of silent chain drive systems. A chain drive system demands in its alignment that all shafts must be parallel and level with the wheels in line, furthermore, bearings and all supports must be rigid and maintained so.

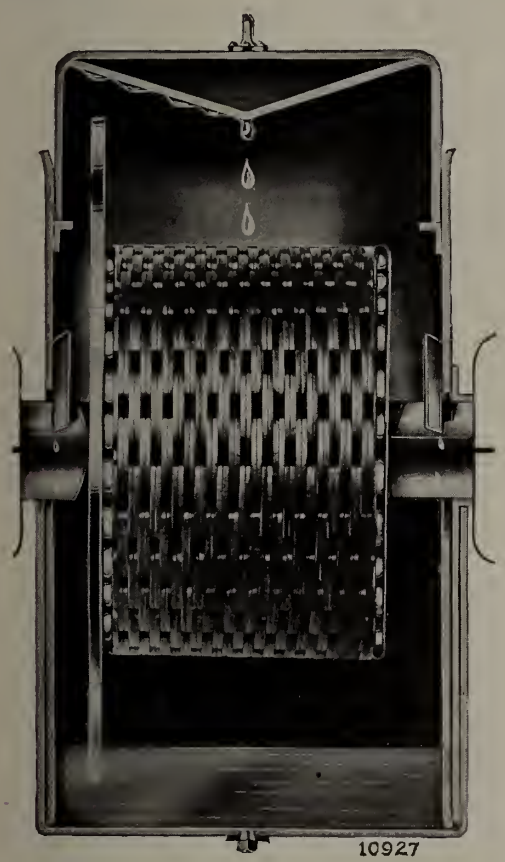


Fig. 1—Cross section of Automatic Lubricating Casing with Cover in place.

An Automatic Lubricating Casing, a cross-section of which with cover in place is reproduced in Fig. 1, consists of a motor seal, bottom section, middle section and a cover. The seal is placed on the motor shaft before putting on the pinion. The bottom section is then securely attached to the motor support base by means of suitable bolts and nuts. The middle section is adjusted with the extra long opening at the motor end of the drive to permit adjustment of chain tension.

It is very important to remember that the metal seal should hang suspended between the bottom and middle sections and that the seal fits free on the shaft. The type of oil recommended for silent chain drives is any good grade of extra heavy engine, or non-fluid oil.

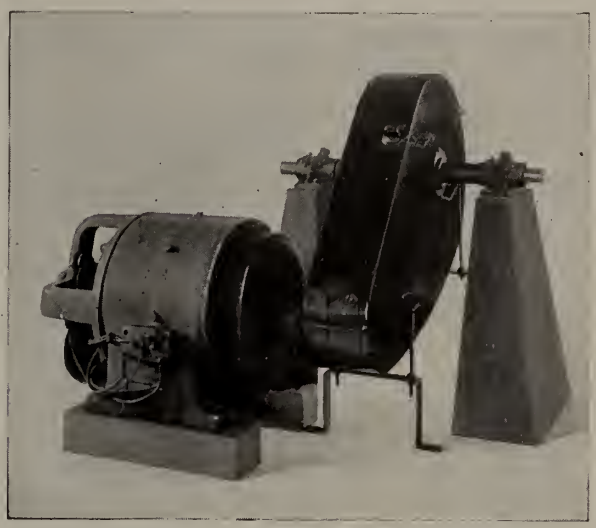


Fig. 2—End view of a Silent Chain Casing (oil retaining type) in position showing supports.

For open running drives the lubricant should be applied once a week or oftener, on the inside of the chain, with a sufficiently wide brush. With drives running in oil retaining casings, the oil level should be maintained sufficiently to immerse the lowest point of the chain.

With the Automatic Lubricating Casing, the oil level should be maintained sufficiently for the disc to dip not less than one-eighth inch. To clean the chain the use of kerosene or gasoline is recommended. The cleaning should be followed by a thorough re-lubrication before the drive is started.

Regular periods of inspection, to see that all parts are maintained rigid and chains properly lubricated, add to the life and satisfactory operation of the drive.

Fig. 2 illustrates a drive ready for operation with oil retaining casings properly assembled and rigidly supported. To ensure satisfactory results from casings of the type shown care should be taken to see that the shafts are in alignment and that the casing is rigidly supported.

The Canadian Link-Belt Company, Ltd., Wellington and Peter Streets, Toronto, have issued a booklet, No. 487A, 1921, which fully illustrates the principles of automatic lubrication of silent chain drives. A copy will gladly be mailed on application.

London.—A conference of Australia farmers recently passed a resolution in favor of a voluntary wheat pool.

Elevator, Mill & Personal Notes

Toronto.—Further particulars to hand indicate that the fire which recently destroyed practically the whole plant of the Pfeffer Milling Company caused a loss estimated at approximately $100,000.

When the fire was at its height the large tin roof over the elevators collapsed. The elevators and flour mills are in ruins and the chopping mill so badly gutted that it will be some time before operations can be resumed. The building was heavily stocked with grain and flour, which will be a total loss.

The company's large warehouse which is adjacent to the burned structure, was saved from the flames only by the persistent efforts of firemen. This warehouse was filled with flour and other material.

Portage la Prairie, Man.—Elevators of the Metcalfe Grain Co., Ltd., the Forsyth Elevator Co., Ltd., and the Premium Elevator Co., Ltd., were destroyed by fires which were the outcome of a recent severe storm which swept this district. An explosion is believed to have preceded the outbreak of the fire which gutted the Forsyth house but this has not been confirmed.

Toronto.—The Alexander Brown Milling and Elevator Company, Esplanade, Toronto, are plaintiffs in a proceeding against the Canadian Pacific and Grand Trunk Railways, and the Toronto Terminal Railway Company, in which $451,451.87 are claimed as damages. The company are lessees of lands on the Esplanade, which were to be expropriated in connection with the construction of the water front viaduct. The damages asked for are for business losses and profits which the company might have made had they had free use of their land and plant.

Toronto.—Elaborate alterations and improvements to the general offices of the Maple Leaf Milling Company, Ltd., in the Dominion Bank Building, are in progress. With a view to centralizing their executive staffs the company are taking over practically the entire sixth floor of the building in which heretofore they have only occupied a portion. Tenants in adjoining offices are moving out to make way for the enlarged premises of the company.

Toronto.—The grain, feed and flour firm of C. R. Vannatter & Co., Limited, which has been located on the sixth floor of the Dominion Bank Building has moved to Room No. 718 in the same building.

St. Jacobs, Ont.—The 180-bbl. mill of the Snider Flour Milling Co., Ltd., burned down recently with a loss of $62,000; insurance $35,000. Plans for replacing the plant are under consideration.

Winnipeg.—Work has started on the addition of three stories to the Grain Exchange building on the west side. The building will be carried up to the level of the present northwest corner. The extension is being made by the Carter, Halls and Aldinger Construction Co.

Messrs. Vernon and Buckerfield, feed manufacturers, Vancouver, B.C., have purchased a Monitor Combined Oat Clipper and Cleaner from the Huntley Manufacturing Company, Ltd., Tillsonburg, Ont., and Silver Creek, N.Y.

Mr. James Stewart, formerly chairman of the Canada Wheat Board was re-elected president of the Maple Leaf Milling Co., Limited, following the recent annual meeting of the company held in Toronto. The following directors were elected by the common shareholders: Messrs. James Stewart, Winnipeg; J. S. Barker, Toronto; R. Cooper, Welland; W. Steed, Port Colborne; A. R. McDonald, Winnipeg; D. Lorne Cameron, Vancouver, and W. H. McCarthy, Toronto. The preferred shareholders elected directors as follows: Messrs. C. W. Band, New York, and W. Leroy Shaw, Toronto. Mr. W. H. McCarthy succeeds Mr. D. A. Campbell, who resigned from the Maple Leaf directorate some time ago.

Mr. C. R. Vannatter, of Messrs. C. R. Vannatter & Co., Dominion Bank Building, Toronto, spent a few days at his old home in Embro, Oxford County, recently.

Mr. M. F. Cohn, of the Sun-Set Feed and Grain Company, Buffalo, was a recent visitor on the Toronto milling and grain trade.

Mr. M. A. Halliday, of the Royal Milling Company, Chesley, Ont., spent a few days in Aoronto recently.

Mr. M. A. Pollock, manager of the Canadian Flour Export Company, Royal Bank Building, Toronto, together with Mrs. Pollock, spent an enjoyable outing at Havelock, Ont., recently.

Mr. R. A. Thompson, of Lynden, Ont., president of the Dominion Millers' Association, is up and about again after his recent illness.

Mr. W. C. Omand, Royal Bank Building, Toronto, who has been ill for about ten weeks, is now recuperating at his summer cottage on Lake Simcoe.

Brig.-Gen. A. E. Labelle, president of the Canadian National Millers' Association in his capacity as vice-president of the Dominion of Canada Rifle Association for Quebec Province, inspected the Canadian Bisley team at Montreal while en route to England recently.

Mr. P. McLachlan, manager of the Dwyer Elevator Company, Lumsden, Sask., received an order recently for 6,000 140-lb. sacks of flour to be shipped by the end of the month to the Russian Relief Fund Organization.

Mr. Wm. W. Hutchison, Montreal, vice-president of the Lake of the Woods Milling Company, has been inspecting the company's mills at Keewatin, Portage la Prairie and Medicine Hat.

Mr. D. M. Frazer, sales manager Western Canada Flour Mills Co., Ltd., Winnipeg, concluded a business trip through Western Canada recently.

Mr. A. W. Alcock, chemist, Western Canada Flour Mills Co., Ltd., Winnipeg, attended the annual convention of the American Association of Cereal Chemists, at Kansas City, Mo., recently.

Mr. A. McMillan, manager of the Robin Hood Mills, Ltd., Calgary, Alta., was a recent visitor in Vancouver, B.C., in the interests of his company.

The Brackman-Ker Milling Company, Ltd., New Westminster, B.C., have installed a Monitor Combined Oat Clipper and Cleaner, the product of the Huntley Manufacturing Co., Ltd., Tillsonburg, Ont., and Silver Creek, N.Y.

THE PRACTICAL MILLER

DUST COLLECTOR ON RECEIVING SEPARATOR FOR CUSTOM MILLS

The idea of the installation of the dust collector on receiving separators is that all the screenings can be sacked from the same hopper on the grinding floor, and the farmer or any other patron can get all the chaff and light screenings that would otherwise be blown outside the mill.

In custom mills where the farmers bring their grists for exchange, as a rule they practically know how much wheat they have. If their wheat is very dusty, the separator fan will blow several pounds of trash outside the mill where there is no dust collector connected with the separator. That makes a difference in the weight of the wheat and screenings, and sometimes is the cause of an argument.

If a dust collector is rigged up for the separator fan to blow into, and the screenings that settle in the dust collector are spouted to the same hopper that the screenings from the sieves run into, then there would be very little difference in the weight of the wheat before cleaning and the weight of the wheat and screenings after cleaning.

The ultimate result is more satisfied customers, and satisfied customers mean more business, and business is what most millers are after.

WHY SOME SMALL MILLS GO UNDER

There is one outstanding element in the competition of the large mills which the small mill has not been able to meet. The small mill owner knows he can hold his own when it comes to quality and price; his trouble lies in the fact that the general public has never been brought to appreciate the advantages which the local or nearest mill has to offer to its people.

When it comes to milling good flour, the average small mill owner is in his element. His life's training has been along milling lines. But when it comes to advertising and selling, it is quite another matter Modern advertising and selling are just a little beyond his line of training, and in many instances beyond his understanding.

In hundreds of cases owners of small mills have been advertised out of business by big mill competitors and never did realize just what happened to them. They knew that the big mills came into their territory with a flour which was no better than theirs, got a better price for it, and took their business away from them.

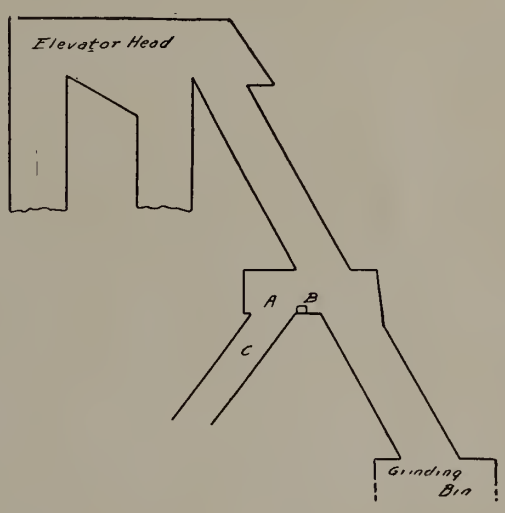
Some of the larger mills spend hundreds of thousands of dollars in advertising their flour. They do not do this to satisfy their personal pride in their brands, nor just to see the names of their brands on black wall spaces and in the different publications. They do it for the purpose of creating a demand for their flour. When they have created the demand they not only create a source of outlet for their flour, but they are enabled to get the price.

The small mill owner is not to blame because he has not been able to meet the advertising of the big mills. Upon his own resources he is helpless. The cost of creating a local advertising campaign would be beyond the average community mill owner.

Modern advertising requires pictures and a carefully worked out plan of application and a methodical, persistent follow-up. Advertising, in brief, must be so interesting and so persistent that interest will be perpetuated in the minds of the public. The average small mill owner does not have this advertising training, nor does he have the facilities for putting the necessary plans into effect even if he did have the "know-how."

AN OVERFLOW FOR WHEAT BINS

The trouble experienced in mills of grinding bins filling up and choking elevators, scourers and other machines, can be obviated by an overflow spout, built as shown in the accompanying drawing. In the spout leading to the grinding bin a box, A, is put in, extending back of the spout to make room



for overflow spout C. A small piece, B, is put in the bottom of A so that wheat will not flow down C before the grinding bin is full.

When the grinding bin fills the wheat backs up in spout, but when it gets to A it flows over B and down spout C, which leads back to the tempering bin.

SOMETHING ABOUT RUBBER BELTS

A "cheap" conveyor belt of poor quality is one of the undesirables in transport, for its service is indifferent and its life problematical. The usual failures of rubber-cum-duck belts consist of peeling or blistering, wearing through, separation of the plies, and destruction of the edges. If the rubber top adheres to the first ply of duck, that is an indication of its non-peeling capacity. Good rubber will resist abrasion, and rubber has become so cheap that a bad quality is unpardonable. Even if the belt has been properly made, it will not give right service if carried on badly constructed idlers. An idler ought to have all its rollers placed on the same transverse centre line and arranged so that they fit closely to the natural curve of the belt.

THE PRACTICAL MILLER

A COMPARISON OF HARD AND SOFT WHEAT

As a rule soft wheat contains less protein than does hard and, for this reason, it has been generally supposed that the difference in the flours made from the two varieties is mostly chemical Yet there are a few things that might cause a doubt as to the correctness of this supposition, says Edgar S. Miller, superintendent of the Leavenworth Milling Co., Leavenworth, Kansas, in "The Dixie Miller."

Before making the statement that, in his opinion, the dissimilarity of the two varieties of wheat, and the flour made therefrom, is chiefly physical, the writer wants to state that he does not assert that there is no chemical difference. On the contrary, there are many good reasons for believing that the physical characteristics of the wheat berry are largely determined by the chemistry of its constituents. Chemistry may be, and probably is, responsible for the difference in two peas grown in the same pod, but such chemistry is altogether too subtle for the comprehension of even a trained chemist.

Chemical Composition of Wheat

"In considering the chemical composition of wheat and flour we are only able to determine with approximate accuracy the names of the elements entering into the compounds or aggregation of elements, and the quantity of each element. We have no means of knowing what alchemy of Nature—what combining of sunshine and frost and darkness and moisture—is responsible for the physical structure of the finished product. We analyze for nitrogen, and we assume, because a certain quantity of nitrogen is present, that a corresponding quantity of protein is there, since we are reasonably certain that the percentage of this element contained in protein is fairly constant.

We may go further, and analyze the protein of the wheat or flour, and we shall find that it is composed of certain elements in varying amounts; but there is no definite relation between the quantity of any of these elements and the kind of wheat from which they were derived. In fact, it is doubtful if chemistry, alone, can determine whether a certain protein came from wheat or corn or oats.

"I do not mean to infer that the man charge of the mill laboratory cannot determine the origin of any protein; but I do believe that in making such determination he will have to be guided by physics rather than by chemistry," Mr. Miller says.

There are present in the wheat-berry two proteins that evidently do not occur together in any other grain. In the presence of water they will combine to form a substance called gluten. One of these proteins is soluble in a certain mixture of alcohol and water, and it is called gliadin Corn contains a somewhat similar substance which is named zein; but though it is soluble in the same mixture of alcohol and water it will not enter into combination with another protein to form gluten, as we understand the word. Zein is certainly very different from gliadin, but the difference appears to be mostly physical. We know that it is not gliadin because we cannot mix it with glutenin and form a coherent mass of gluten, but that is about all the chemist and the miller knows about it.

All wheats contain the requisite constituents of gluten, but there is known to be a great difference in the character of the gluten formed from the flours from different varieties. If this difference is chemical the chemist seems unable to so determine for, so far, he has not told us whether one has an excess or a deficiency of gliadin, or too much or too little sulphur or oxygen or carbon. He passes it up with the statement that some gluten is of "good quality," and some of "poor quality;" and he bases his opinion, not on chemical analysis, but upon physical phenomena.

It is generally believed that vitreous wheats are relatively high in protein content, and that the soft varieties are deficient in gluten, or gluten-bearing proteins. It is sometimes said that the reason the flour from vitreous wheats frequently fail to produce good bread is because its gluten is of poor quality, while that from the soft wheat is usually good. But when we find, as we have found this season, a soft wheat carrying more than 12% protein, and yielding a patent flour with more than 10.3%, and an extremely hard, vitreous wheat the protein content of which is a scant 11%, and whose flour has but 9.80%, we cannot but doubt the correctness of that view.

So far as could be determined by ordinary chemical analyses there was no difference in the flour from these two wheats except, of course, in the actual quantity of protein contained. Neither was capable of producing a good loaf, but the difference in the nature of the failure was marked. The bread from the vitreous wheat was tough and coarse-grained, its color was yellow, and its crumb coarse and harsh. The soft-wheat loaf had a fair color and crumb, but its volume was small, and its texture too close. A loaf baked from a good hard-wheat patent, with a protein content of 10.3% was 20% larger than the one from soft wheat, and its color and texture were excellent; while another loaf made from choice soft-wheat flour, with but 9.80% protein, so far excelled the one made from the vitreous wheat as to put them in an entirely different class.

It seems certain that the assertion that it is not the quantity of protein, alone, that determines the baking quality of flour, but the quality of the protein, or the gluten, of the flour, is correct. We millers have been willing to concede this for a long time, and most cereal chemists appear to be willing to admit it now But this does not tell us whether the quality of the gluten is dependent upon its chemical composition or its physical characteristics. And in the absence of any conclusive evidence that it is the former, I am inclined to believe that it is the latter.

On the other hand, no amount of water will make the vitreous wheat flour easily. True, a certain amount of added moisture will soften the berry to the point where it will offer less resistance to the

(Concluded bottom of page 29)

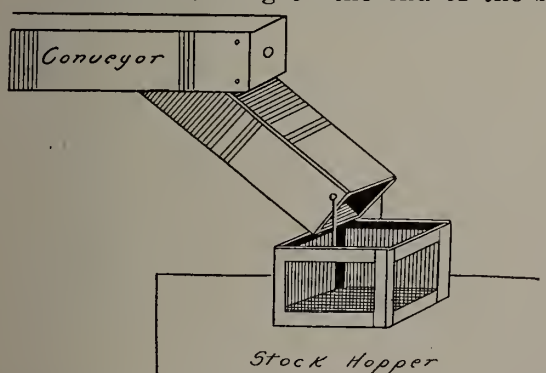
THE PRACTICAL MILLER

THE IMPORTANCE OF PROPER BREAKING

Breaking the wheat down as the first step in the manufacture of flour after the cleaning and tempering has been cared for, is a step which must be watched closely. It is possible to throw the best arranged mill out of balance if the breaking is not done right or to conform with the system. It is possible to break too high—make more middlings than the smooth roll surface will handle It is also possible to break too close; or, in other words, not to divide the work among the break rolls properly, and as a result make so much break flour that the best results are not possible. Of course, break flour need not be inferior but at that, it is not the best and most desirable flour. It is well to avoid making it. Fear is entertained in some quarters that if millers make too many middlings on the breaks they will not have enough smooth roll surface to reduce the middlings to flour and get capacity and a finish. This may be possible in a mill which has too much break roll surface. If this should be the case it will be an easy matter to shut off some feed and make a good job of it breaking. It is well known that a mill can do better work on the breaks in every way if the rolls are not crowded. But if the miller should find that he can break more than he can reduce, then he can get out of the tall timber very easily by simply putting in at least three pair of corrugated rolls for the reductions of his surplus middlings. This will increase the middlings reduction capacity and make so much better flour than he will gain in every way over what he would do with the smooth rolls.

A STOCK HOPPER BASKET

There is always a chance for a bolt or nut or other foreign material getting into the stock hopper. A wire basket hung on the end of the spout,



as shown in the drawing, will catch anything that would otherwise go to break roll and cause damage. A wood frame filled in with heavy wire answers the purpose.

(Concluded from page 28.)

mechanical action of the rolls, but its endosperm persistently refuses to be crushed into flour. If we soften it too much the smooth rolls will flake it, and if we try to grind it too dry we may crack it up into rather small middlings; but we will use a lot of power in doing this, and we will get a comparatively small amount of really fine flour, and a good deal of pulverized bran.

EXCESSIVE BOLTING AND ITS EFFECT ON FLOUR QUALITY

There is no doubt that much harm can be done to the stocks of a mill by causing the product of the rolls to pass over more sifting surface than is necessary. This is particularly true of the heavy material usually sifted on wire, such as the scalps of the breaks. It is no doubt true, also, of the cleaner stocks, though in a diminishing degree. The smaller the percentage of impurities contained. and the finer the sifting medium, the less danger of abrading impurities. Very fine middlings are rather hard to abrade, and the dangers of overbolting with this class of stock may have been somewhat overestimated.

If the stock entering a sifter section or reel contains impurities in such a fine-divided state that they are no larger than the particles of flour, it is hard to understand the logic of attempting to carry them over to the next reduction. If one does succeed in passing some of them out with the tail-over, they will certainly be accompanied by some good flour which should have gone to the bin. This flour will undoubtedly suffer from further contact between rolls with these impurities, as well as with the larger ones which legitimately passed over the tail.

True, a lot of starch may be released by the reduction, and the impurities may be buried among the apparently white material resulting from the further crushing of the original flour. But the undesirable material will be there, just the same; and it is useless to try to fool ourselves into thinking we have a pure flour just because it looks white in the dust.

The Greater Danger

A great deal has been said about the dangers of overbolting, but little of the disastrous effects of carrying flour with the middlings to the next roll; yet, the latter danger is the greater. No real practical miller will advocate bare-bolting; it would be foolish from an economical standpoint, if from no other. But it has been proved times without number that the fine, bluish-white product of reduction is inferior in every way to the material that has been reduced only just enough to allow its passage through the meshes of the proper flour-cloth. The flour through the later cloths on the sifter may appear a little more specky, and it will certainly not be so white in the dust; but if the stock passing over the flour cloths has been well-scalped, and the meshes used are in proportion to the nature of the original middlings, the rougher flour will carry the lower percentage of ash and the higher percentage of gluten. Its color in the loaf will also be superior.

The miller who has the advantage of his own laboratory, where the relative value of flours from different sources can be quickly ascertained, is usually in no very great danger from an overanxiety to avoid bare bolting. Should he attempt to lower the ash-content of his product by carrying flour with the tail-overs to the next reduction he

THE PRACTICAL MILLER

will quickly find, if he makes an honest effort to learn the true value of his different mill-streams by the usage of both physical and chemical analyses, that such procedure is not likely to give him the results for which he is striving. But the miller who must depend wholly upon his ability to judge flour by its appearance is sometimes in danger of being misled by the superior dress and the apparent whiteness of the product of underbolting.

Judging Flour Values

Many millers operating small mills must judge the value of their flour by two means only, its appearance, and the satisfaction it gives their customers. The first is not always conclusive evidence, and the second is sometimes hard to learn. In any event, when users do report dissatisfaction, it is often quite a task to find out in just what way the flour failed. Of course, if all the users are thoroughly satisfied, the miller is probably justified in believing that his mill is performing satisfactorily. In such event nothing need be said, unless the mill needs more customers than it has, in which case it might be well to know if the product would satisfy prospective customers, too.

But when dissatisfaction does occur, as it sometimes does with most mills, a very thorough physical and chemical analysis should be made with a view of learning where the fault lies. There are no milling experts who can be depended upon to locate the trouble in a few minutes with the aid of a flour slick and testing board, nor can a cereal chemist make a test for ash, protein and moisture and prescribe an infallible remedy.

Three Tests Often Necessary

It is sometimes rather difficult to determine just what is the matter with a certain flour. The baking test will confirm that something is wrong, but it will not usually divulge what it is. Chemical analysis may show it up but again, it may fail to do so; for the constituents of the flour may be identical, chemically, with one that gives superior results. If the fault is with the milling, and it consists of either over or under-bolting, physical analysis will do more toward showing it up than will any other method. It will usually require all three tests, physical and chemical analyses, and baking, to ascertain why a flour fails to produce satisfactory results.

THE PHYSICAL CHANGES OF GLUTEN

Gluten may undergo quite distinct variations as regards its elasticity, toughness, brittleness or non-cohesion, ductility and stability, quite apart from any change in its chemical composition. This peculiarity seems to be largely overlooked by millers. The general idea being that gluten, if obtained from wheats termed hard or medium, have a comparatively fixed physical character. Among the many factors which cause great variation in the physical state of gluten, temperature has much effect; 10 deg. F. difference will entirely alter it, especially in what is termed stability, or power to retain its shape when dough is moulded into loaf, a very remarkable fact being that the change caused by alteration of temperature is almost instantaneous, and the change is not of a permanent character, as the same piece of gluten made to feel tough and comparatively non-elastic or less elastic in cold water, when immersed in warmer at once loses the toughness and becomes elastic. The following experiment will illustrate this fact. Wash out gluten from an ounce of flour when made into a dough until the water is no longer milky or turbid, using water at the temperature of 76 deg. F. Then put the gluten in water at 60 deg. F., when it will be found considerably tougher and less elastic. From the cold water place it in water at 90 deg. F. It will be found softer and much more ductile than in the previous two waters. If again placed in the cold it will at once regain the toughness and be less elastic. Not only does temperature alter the physical state. It also has much influence as regards the amount of gluten formed in the flour during the dough making processes. On the same wheat the following various quantities have been obtained under the most careful manipulation and exact conditions. When the water used was 20 deg. F. the quantity of gluten obtained was 7.83 per cent. on the same quality and kind of flour, when the water was 77 deg. F., it yielded 9.24 per cent. Some people may say this was caused more by the personal equation than the temperature, and that gluten can never be washed out twice alike. Experience has shown that, with practice and ordinary care, five lots of gluten can be washed out of the same flour with a variation of only 0.1 on the whole lot. In addition it has been found that the gluten absorbed more water at the higher temperature. It has also been found that the physical character of gluten is much influenced by mineral substances that may be in the water, such as lime, magnesia and sulphates. The hardness of the water used will greatly alter the physical characteristics of the dough. A water of 24 degrees of hardness will cause a larger amount of gluten to be formed in the dough than a water of 10 deg. of hardness. A practically pure water, such as distilled water, has a solvent action on the gluten, and also hinders its formation in the dough. But when water with the amount of hardness is used that will arrest and hinder the solvent action of pure water, a larger amount of hardness or mineral matter than that which is necessary to arrest the solvent action will have the effect of increasing the water absorbing capacity of the gluten, instead of increasing the quantity obtainable. It has been found by the French chemist, Marcel Arpin, when water is at 21 deg. hydrolimetrie (French scale), the quantity of gluten obtained was 8.08 per cent. When the water was 141 deg. gluten was 7.99 per cent. But the water absorbing capacity had increased from 68.3 per cent. to 71 per cent. hydration. Milling chemists may consider that the characteristics of gluten which make it most valuable to the baker are largely physical, which are soon changed by the various mineral and chemical salts, as well as acids with which it may be in contact, even if the chemical constituents are unchanged.

THE PRACTICAL MILLER

RE-ARRANGEMENT OF EXHAUST FAN MAY MINIMIZE DUST EXPLOSION

The investigation of a large number of disastrous dust explosions in modern up-to-date mill and grain elevator plants in recent years has added a number of new causes to the original so-called "Simple" or "Common List." It was not generally believed that the breaking of an incandescent electric lamp bulb in a dust cloud might result in an explosion.

In considering dust control attention should be directed to the explosions that have originated in the exhaust fan installed in the system. In connection with the removal of fine dust from buffing and polishing wheels, grinding rolls and similar equipment, exhaust fans are installed in many large establishments. The fine dust, for sanitary reasons principally, is drawn from the source of production, through pipe trunking, into the exhaust fan and then blown into the collecting device.

An explosive mixture may be formed when the dust passes through the fan, and all that remains to start the explosion is the contributing cause. This may be sparks from a broken fan blade or from foreign material such as bolts, nuts, screws, etc., passing through the fan. This cause is mentioned since a number of disastrous explosions have been associated with the exhaust fan and dust collection engineers are now giving consideration to a possible rearrangement of the fan location in one dust removal system.

It is difficult for a dust explosion to originate unless the dust and air are mixed in explosive proportions. It has been possible for flame to propagate through dust clouds when about 1-50 oz. of dust was present per cubic foot of air. An effective way to prevent dust explosions would naturally be to prevent, if possible, the formation of explosive dust clouds and to eliminate the source or cause of ignition. This is especially true with open flames and the simple causes already referred to.

Electric lamp bulbs located in parts of the plant where explosive dusts are created should be protected with vaporproof equipment and precautions taken to prevent dust ignition by sparks from motors, switches or blown fuses. Effective precautionary measures should be adopted for the control of static electricity produced by operating mechanical equipment.

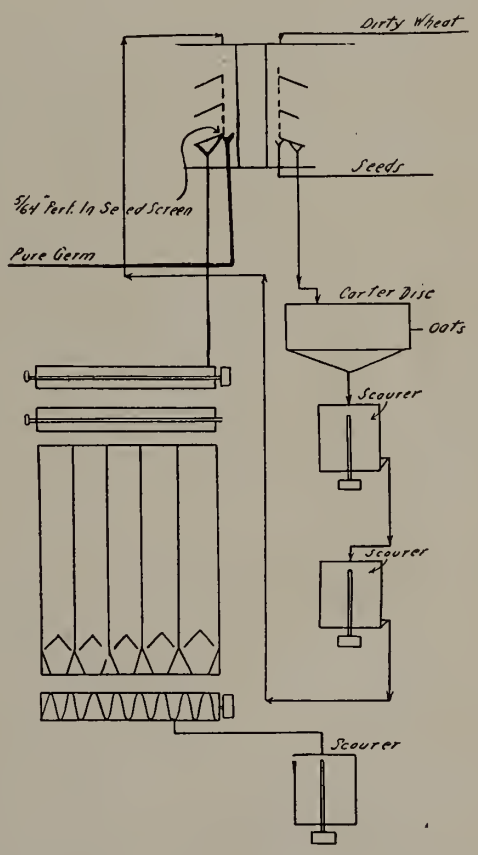
It would appear logical to conclude that the best way to prevent dust explosions would be to adopt measures to prevent the dust from collecting or accumulating through the plant. It is always harder to stamp out a disease after it has once started than to adopt the necessary sanitary measures to prevent the disease from taking hold. This procedure can generally be followed in milling or grain handling establishments by the introduction of the most modern types of dust collecting appliances.

In some grain handling plants commercial regulations prohibit the removal of any dust between the point of receipt and the point of weight. This regulation has been considered essential in order to maintain uniform weight between shipper and receiver. It was originated before the dust explosion hazard in grain elevators was fully recognized.

Since the most destructive explosions in recent years in this country and in the United States have occurred in grain elevators it is very essential that this problem be satisfactorily adjusted.

A WHEAT CLEANING FLOW

This wheat cleaning flow is employed with remarkable success in a large mill doing a considerable export business. The diagram is sufficiently clear so that detailed explanation is hardly necessary. The removal of the germ by the use of 5/64 perforated screen on the last separation is the key to the success of this flow. This particular operation makes a wonderful difference in the flour.



BEWARE DUST COLLECTOR STOCK

It is quite safe to assume that ash will be increased in flour by rebolting the dust from purifiers, aspirators and roll exhaust dust collectors, especially if the dust collectors are of the tubular type. Dust collector stock is never clean and clear looking. It is bad stuff to have to be bolted and sent to straight flour. Unless millers are making a clear flour which is sold in the large centres to large concerns, they had better go easy on dust collector stock. It is dangerous to put it into a family flour.

THE PRACTICAL MILLER

CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

FOR SALE—50-barrel Midget Marvel Mill with elevators, beltings, etc., and complete installation for flour mill plant. Also grain grinder, ton per hour capacity. Good reasons given for wanting to dispose. Will sell cheap. Terms given for satisfactory paper. Reply Box 145, Carleton Place, Ont.

SALESMAN AVAILABLE for the Province of Quebec. Excellent connections in Quebec City and district. Has had several years experience and has represented several leading firms. Can furnish best of references. Reply Box 114, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED — By Head Miller, with 20 years practical experience in modern Canadian mills up to 4,000 barrels capacity. Can guarantee best results as to quality and yield on both hard and soft wheat, and maintain mill at highest point of efficiency. At present in charge of a 1,000 barrel plant. Reply Box 85, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

PRACTICAL MILLER with 23 years experience seeks position with plant having daily capacity of 250 barrels or upwards. Can furnish excellent references. Reply Box 82, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—A 50-barrel Midget Marvel Mill, also complete installation of a flour milling plant. In use about three months. Machinery must be moved from actual premises. Good price for cash. Reply Box 103, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Head miller, with twenty years experience in 150 and 275 barrel mills, and still employed, is desirous of making a change. Applicant is 36 years of age, married, and can furnish excellent references. Reply Box 84, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

SALESMAN WANTED for the Province of Quebec. State requirements, experience and salary wanted. Reply Box 102, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

FOR SALE—Plansifter. Size No. 2, with Stratford drive, four breaks, first middlings and sizings. Address Brampton Milling Company, Brampton, Ont.

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WATER POWER FOR SALE.—One thousand horsepower on three leading Canadian railways and Great Lakes waterway. Less than 5 per h.p. per year. Elevator close. Town of five thousand population. Situated in Old Ontario. Reply Box 111, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

POSITION WANTED as head miller in a small or medium sized mill. Applicant has had twenty years' experience. Thirty-seven years of age. Reply Box 110, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FLOUR SALESMAN, speaking English, French and Spanish, seeks connection with milling concern. Reply Box 106, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—Sixty Barrel Stratford flour mill, Allis Rolls, Whitlaw Flour Sifter, Packer, Cockle Machine, etc., all in good running order. Full particulars and price on application to The Pearce Co'y, Ltd., Marmora, Ont.

FOR SALE — Flour mill machinery. Practical enough to fully equip small mill. All modern and in good shape. Attractive price. Reply Box 116-6, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

SALESMAN, with first-class knowledge of flour and feed trade in the Maritime Provinces is available for engagement. Results guaranteed. Excellent references. Reply Box 113, "Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

SALES EXECUTIVE,

Several years experience as principal in Ontario and western grain business, also feed manufacture and distribution; thorough knowledge of French; conversant with grades, options, premiums, hedges, freights and carrying charges. Wants to connect with first-class grain or milling concern. Reply Box No. 115, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Miller, thirty-seven years of age, is open to take charge of small or medium-sized mill, or to take position as second miller in large plant. Has had twenty years experience. Thoroughly familiar with all branches of milling. Can furnish excellent references. Reply Box 107, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

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The Question Box

With a view to making this department one of real service, "Canadian Milling & Grain Journal" cordially invites its readers to send in their problems to The Question Box. There are but very few millers or elevator operators who do not have worries in the proper conduct of their plants. It may be due to lack of experience or inability to trace cause and effect. The logical and sensible thing to do is to ask someone who may possibly know. Often he is not at hand, and still oftener the perplexed miller or elevator operator does not want to show his lack of knowledge. Under these circumstances he can address his inquiry to the craft through this journal. His name will not be divulged if he wishes to remain incognito. Someone is sure to reply who has had similar problems to meet or similar questions to ask. We guarantee to devote all the space necessary to the asking and answering of questions, so do not be backward in sending them in. THE EDITOR.

QUESTION.—1. How close should a bran or shorts duster be set to the cloth? This machine is stopped and you have it open. Is there a difference between setting the brushes on these two machines? My idea is that about 1/8 of an inch; or, better than that, about the thickness of a two-foot rule when open. 2. What should be the temperature in a mill building in winter? (a) A reel mill. (b) a sifter mill. I contend 80 degrees and nothing under that. Am I right or wrong in these conclusions?—A. M.

ANSWER.—First—In answer to the question of how close the brushes of a bran and shorts duster should be to the cloth, I would say anywhere from 1-16 of an inch. I keep my brushes just close enough to do the work I want them to do; the brushes on the shorts duster closer than on the bran.

Second—In regards to the temperature of a mill building in winter—I keep my mill building between 60 and 70 degrees; 70 degrees for a reel mill and 60 degrees for a sifter mill. A miller ought to do good work and keep a uniform flour. That has been my experience in both a reel and sifter mill. I don't care to have my bolting flour above 70 degrees to do the best work. If it gets above that I cannot finish quite as close without taking off feed of the first break roll. My mill is steam heated and I can hold the temperature where I want it and I find it a good thing to study.—OLD DUSTY.

WHEN YOU WANT SOMETHING

Whatever you may require in the way of new machinery, equipment, or mill or elevator supplies you will find someone to furnish you in the best and most improved manner in the advertising pages of "Canadian Milling & Grain Journal." The old adage, "A Stitch in Time saves Nine," applies as surely to the miller and elevator man as to any one engaged in any other line of endeavor. Twenty-five dollars' worth of repairs now may save you five hundred dollars' worth later on, while, as for the contemplated addition of new machinery or the extension of the existing plant, there is no time like the present.

The Duster

The colonel of a Scotch regiment, who was disliked by his men, wanted to locate a sniper. He called for Sandy, the crack shot of the regiment, and said: "Sandy, there's a sniper over there. He's been shooting at us all day. The first time he knocked the hat off me and the second time he knocked the cigaret' oot of ma mouth. Go over and get him. I think he's in yon clump of bushes."

Sandy went toward the spot and found a German hidden in a small tree. Sandy shook the tree and down fell the German, who threw up his hands and cried: "Kamarad, Mercy!"

Sandy looked at him disgustedly and said: "Me-r-rcy? Ye'll get nae mer-r-cy from me! Ye missed the Colonel twice."

TO-DAY'S BEST STORY

There was a young lady from Kent
Whose grammar was badly bent;
She said to her flame:
"I'm so glad you have came,
But I'll miss you so much when you've went."

Rufus Redd Dogg

"The county assassination invited me to a pic-nic down t' Squaw Brook grove a week o' so back," remarked Rufus to a knight of the grip who happened to pull up at the front gate one afternoon, "'n ther wuz a politician ther', I dunno whut his monniker wuz, but I know et hed M.P.—more pie, it mus' hev meant—arter it. This bird arter sayin' in a dozen ways all diff'rent but meanin' th' same thing, thet th' farmers ud be th' ultimate salvashion o' th' country, started t' talk about th' necessity f'r economy. He sed as how us with th' rest of th' people 'ud hev t' be satisfied with small pickin's until th' trade o' th' world revived. He sez, sez he," and Rufus' voice rose excitedly, "that th' railways, interest on th' national debt an' extravagance were th' country's wurst enemies an' thet every nickle we cud do without wud be thet much more f'r th' cause o' economy. Warmin' up t' his subject he sez, sez he, thet h'd lik t' see wheat at five dollars a bushel ef it 'ud do th' farmer any good, an' he favored applyin' th' incum tax only t' those livin' in th' cities. He wuz linin' up t' give a speil on th' subject o' protection when Jud Harmon bucked me in th' ribs. "I don't notis anny," he wheezed f'r his lungs wuz bad theta day, "thet he sez annythin' about redoocin' thet $4,000 salary o' his t' help th' cause o' economy," sez Jud.

"Why Jud," sez I indignant like, "an imagination like theta one thet fella hez is wuth all o' $4,000 an' more t' anny party."

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The durability—and consequent economy—of Concrete recommend it for almost any kind of structure; but its advantages are especially apparent for buildings in which grain is to be stored.

There are three great dangers that menace stored grain—all three of which will conquer most materials, but which meet their match in Concrete. These are Fire, Rats, Dampness.

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CANADIAN
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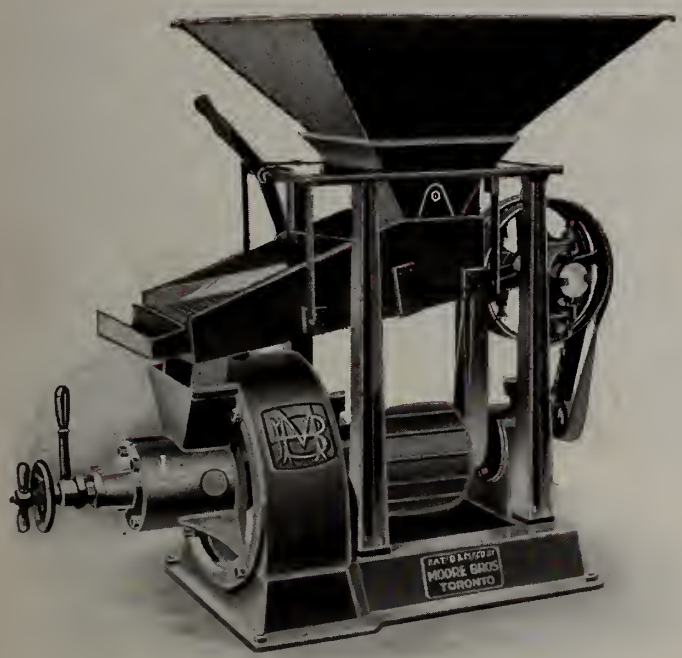
JOURNAL

VOL. III MONTREAL, JULY 15th, 1922 No. 12

THE YELLOW BOOK

Little Power to Operate



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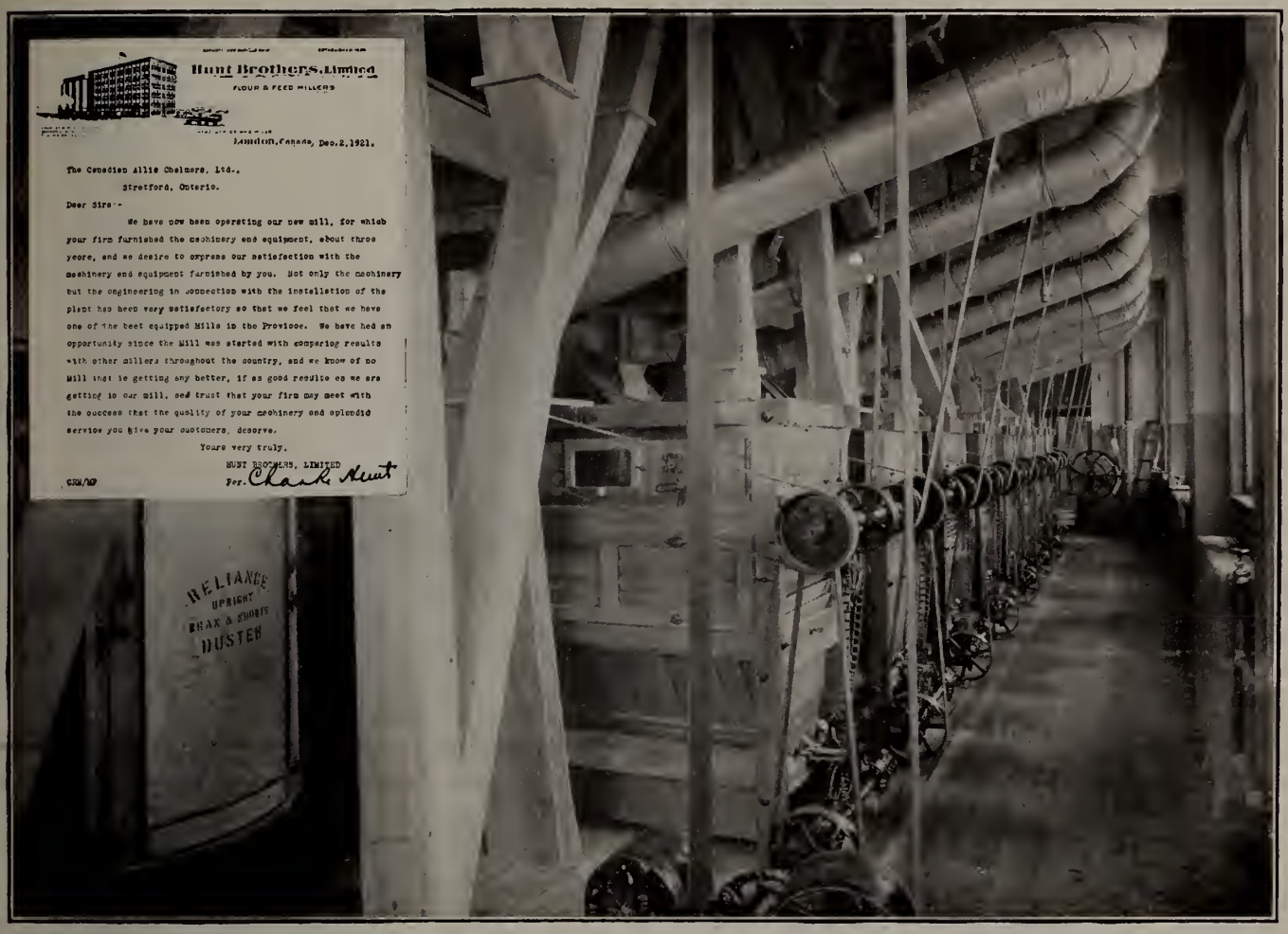
Read Hunt Bros. letter regarding their Mill after three years continuous operation.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The Canadian Allis Chalmers, Ltd.,
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We have now been operating our new mill, for which your firm furnished the machinery and equipment, about three years, and we desire to express our satisfaction with the machinery and equipment furnished by you. Not only the machinery but the engineering in connection with the installation of the plant has been very satisfactory so that we feel that we have one of the best equipped Mills in the Province. We have had an opportunity since the Mill was started with comparing results with other millers throughout the country, and we know of no Mill that is getting any better, if as good results as we are getting in our Mill, and trust that your firm may meet with the success that the quality of your machinery and splendid service you give your customers, deserve.
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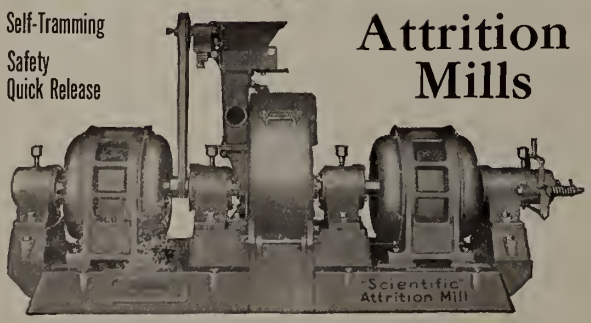

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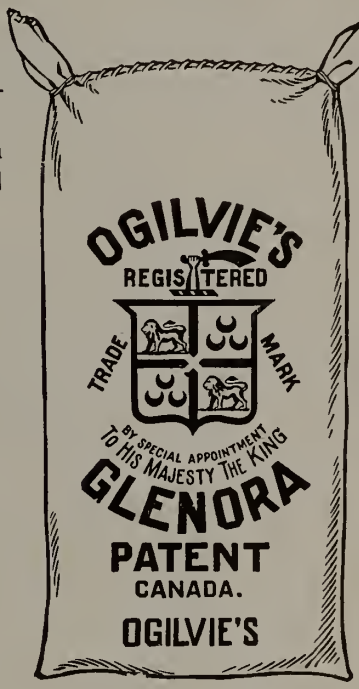

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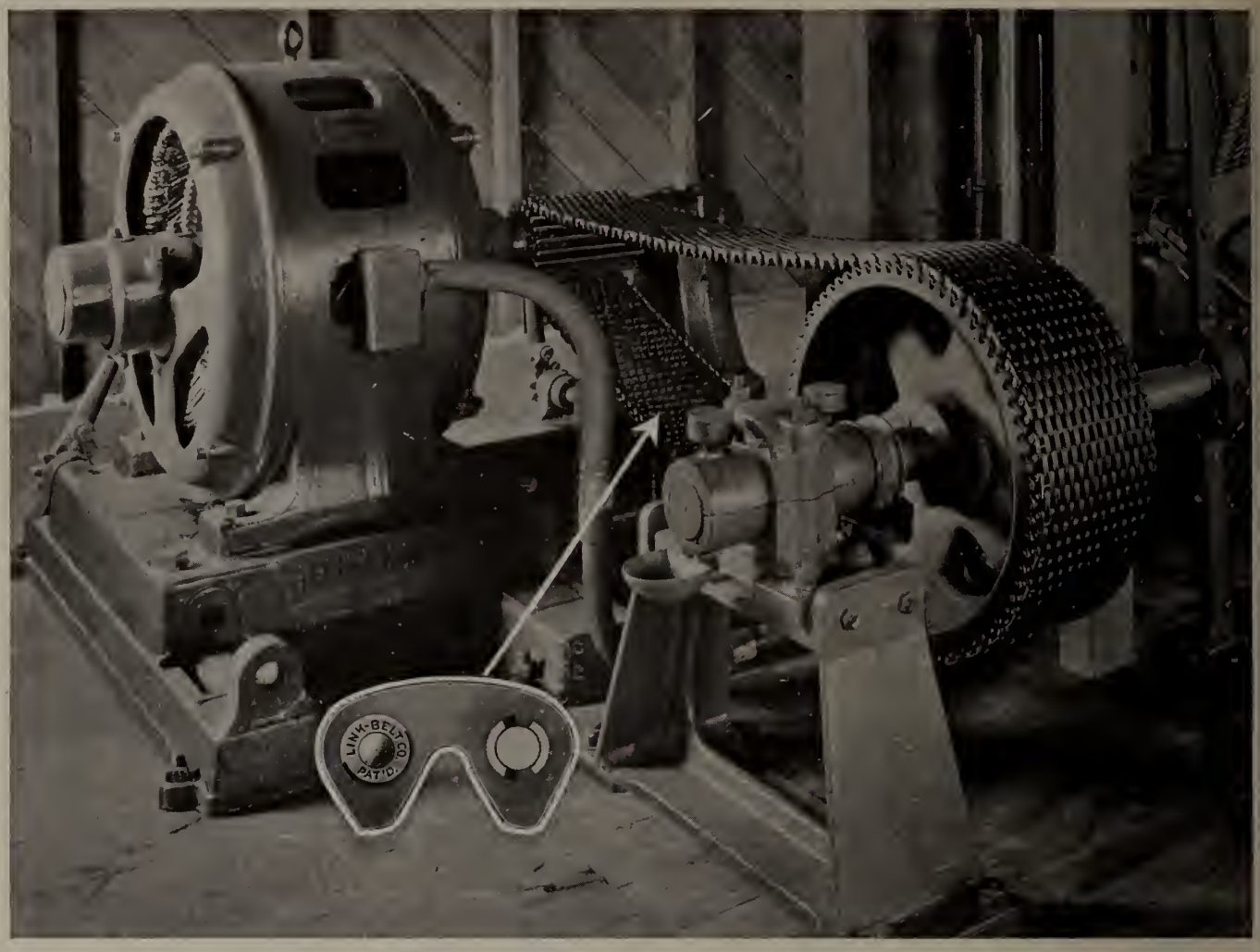

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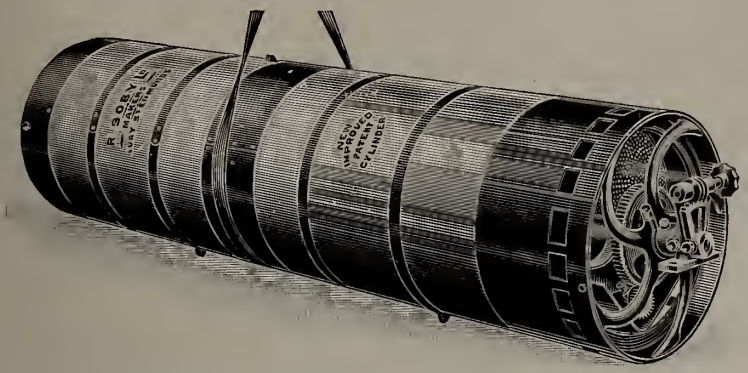

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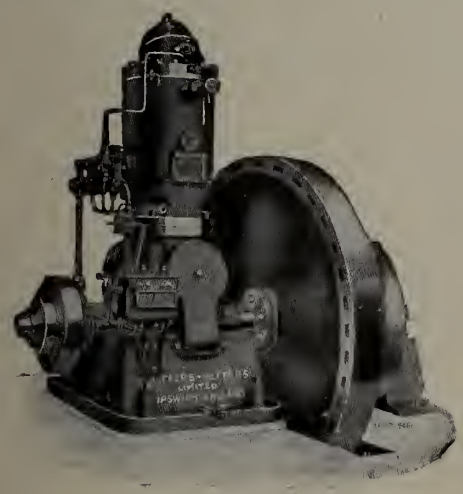

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VOL. III MONTREAL, JULY 15TH, 1922. No 12

CANADA'S ONLY MILLING AND GRAIN PAPER

Selling on Consignment

A GREAT deal of loss in flour milling operations, especially among the large and medium-sized mills can be directly traced to the practice of endeavoring to create more business than there is in sight. Consigning flour or selling on a price guaranteed against decline does not in any way make for the creation of more business, indeed, it is extremely doubtful if it tends towards causing the consumption of an extra barrel of flour. On the other hand selling flour on consignment makes for a demoralization of the trade and creates doubt on the part of the jobber as to the product that he takes on this basis.

Of course, during dull periods a miller may feel justified in dropping all pretence of price-fixing and endeavoring to get what he can for his product but it seems to "Canadian Milling & Grain Journal" that the patient exploitation of trade openings, while they may not prove profitable from the viewpoint of the extent of business done in the early stages, will eventually prove a source of permanent and increasing profit.

Mill Machines and Their Functions

THERE is scarcely any one thing in the operation of a correctly built mill that is of more importance than another. If it is to operate correctly every machine and its adjustment is quite as important as another in the correct operation, and cannot be left out. Every mill, in order to function correctly, must be in the hands of a thoroughly competent miller, who can regulate every irregularity coming up, or he had better step down and out, and enter a good mill under the tutelage of a good headmiller until his efficiency and reliability are thoroughly established.

The regulating of one machine affects another and unless a miller understands that he is going to get into trouble. Very few men in charge of mills know how to break and reduce, and nearly all their troubles come from that source, and many are the mills I have entered and in a few hours have made a wonderful change by simply breaking and reducing correctly.

It is the same in every department, for correct milling must be carried out if successful milling is to be the result.

The Railway Problem

JUST so long as the national government clings to the idea that it is competent to eventually bring order out of chaos with regard to their railways just so long will the national treasury be bled to the tune of millions annually and the day of reckoning which must inevitably come, be hastened.

When Canada's ill-advised experiment—for it is nothing else in respect to public ownership of railways—is examined in the light of the experiences of other countries, the conclusion is forced upon one that those fundamental principles which are necessary to the successful management, operation and development of railroading absolutely prohibit in their practical application any consideration savoring of government interference with an industry, which, save for government regulation in the public interest, is as subject to economic conditions as is any other branch of commercial activity.

The fundamental economic principles that are applicable to the railway industry may be enumerated as follows:—

(1) The railway industry is a basic industry.
(2) The railway industry should be stable.
(3) The railway industry must be self-supporting.
(4) The railway industry should be efficient.
(5) Railway labor should be paid adequate compensation and should not be subject to foreign domination or interference in the direction of their union affairs.
(6) Railway capital as represented by private investment in railway enterprise should be properly rewarded.

The application of these principles, a cessation of useless agitation and the complete divorce of the railways from politics would go far towards solving a problem which is daily becoming more acute.

Scientific Research in Milling

ALTHOUGH the grinding of wheat into flour is one of, if not the most ancient of industries, and one would imagine that there was but little to be learned in regard to it after centuries of practice, the inauguration of a scientific research bureau for the milling industry would mark the commencement of a new era in the industry.

Compared with what is yet to be learned the milling industry has been stumbling along in the dark or the dim twilight with regard to many things upon which its progress, and to a large extent, its prosperity depends. Of course, it would be futile to imagine that even the most efficient scientific

research could unravel all of nature's secrets at a bound, but the future does hold enormous possibilities and problems that can be solved only by patient investigation and research, the reward for which will more than compensate for the trouble and expense incurred.

Any programme of scientific research should of course, go hand in hand with the practical, but at the same time should be kept apart at least in the initial stages. The scientist would have to work out his problems on his own ground and in his own way, and then join forces with the practical man to put them into effect.

For long there has prevailed an idea that some millers' secrets are so important as to warrant their guarding by man-traps and machine guns, but the result of some recent research work in the Cereal Division of the Dominion Experimental Farm at Ottawa which showed that several leading brands of Canadian-made flour were but little different in excellence of quality should convince millers who may think that they have something that their fellows do not possess to exchange opinions and views and thereby advance the interests of the milling industry at large.

A Compulsory Board Next?

ALTHOUGH there is still considerable doubt regarding the actual effect of the new national wheat marketing system when it gets fairly under way, there can be no doubt that the supporters of compulsory wheat control no matter how dissatisfied they may be with what has been gained will feel encouraged and with good reason apparently, to fight harder than ever for wheat control as it existed during the war years.

The acquiescence of the party in power at Ottawa in the voluntary wheat marketing proposals of the Agricultural Committee was a foregone conclusion. In the editorial columns of its issue of March 1 last, under the caption of "Those Wheat Board Rumors," "Canadiai Milling & Grain Journal" asserted that it had good reason to believe that pressure of the strongest kind was being brought to bear at Ottawa to induce the Government to give ear to the pleadings of the western grain growing interests whose mouthpiece is the Progressive party for the re-establishment of wheat control, the intimation being that if the administration restored control they could count on the practically undivided support in Parliament of the agrarian element, the not inconsiderable strength of which added to that of the old Unionist following might, on some important issue place the administration in a precarious position if, indeed, it did not force it out of office altogether."

The budget in this case proved to be the "important issue" and "Canadian Milling & Grain Journal" now believes that lack of definite knowledge as to what the government proposed to do with regard to control was responsible for the opposition of the bulk of the farmer members at Ottawa to the budget proposals.

Insofar as the introduction of any measure of compulsory control is concerned, "Canadian Milling & Grain Journal" repeats what it has said on many occasions, that a government monopoly has no more reason for existence than has a private monopoly, and the creation of a compulsory wheat board or grain board would rivet on to the producers of the province agreeing to it a trust the like of which has not yet been dreamed of, except in some cases of emergency such, for instance, as existed during the world war.

One of the reasons for the existence of the old Wheat Board during the war was the fear lest the prosecution of the war should be hampered by excessive expense, due to inflation of wheat prices, as well as in order to assure supplies of grain when and where they were most needed by the allied nations. The primary and avowed reason for the efforts being made to secure compulsory control is the desire of certain producers of grain, not all of them, let it be said, to get higher prices, no matter whether the trend of world markets warrants them or not.

Auditing Selling Expenses

IN many flour mills throughout the country there are to-day sales executives who are trying to direct sales from their offices and who have never been or never will be anything more than chair warmers. This is a serious mistake, for the sales executive should know his trade as well or even better than his salesmen on the road and should be sufficiently energetic and alive with interest in his work to get out and systematically meet every customer they sell, in addition, of course, to those classed as prospects.

Confidence is not often gained or maintained where a direct knowledge of the party does not exist, and confidence can be more quickly made by close personal contact and friendly relationship with customers.

Incidentally, while on the subject of sales, it may be said that a matter which gives sales executives plenty of food for thought is the determination of the value of a salesman. They are almost invariably sized-up by the amount of flour they sell, no cognizance being taken whatever of the manner in which the business is obtained. The value of a salesman does not altogether lie in the number of orders turned in. It is deliveries that count, and the money that comes to the mill for its products. How many orders has a sales executive received from his roadmen and been obliged to cancel them because of a falling market? Take an inventory of your losses this way and thereby get closer than ever before to determining the real value of the mill sales organization.

A few maxims that sales executives might remember are:

Sell flour outright only.

Steer clear of anything that looks like consignments.

Sell only for arrival draft or sight draft terms, for bear in mind you pay cash for wheat and when you are selling flour on other than draft terms you are acting banker for a firm you are not even acquainted with and this cannot be a sound business policy.

Of the wheat flour exported from China in 1920, 1,350,000 barrels went to Great Britain, 428,000 to Hong Kong, 360,000 to Russia and 91,000 to the Philippine Islands. Stocks of Chinese flour are extremely low, and only two of the Shanghai mills are running, due to the scarcity and high cost of wheat.

EASTERN PROVINCES

MONTREAL

Dubrule Building
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MONTREAL JULY 15TH, 1922

THE MONTREAL MARKETS

Flour.—The demand for spring wheat flour from all sources continues to be very limited, which indicates that buyers in most cases have sufficient stocks on hand to meet their immediate requirements, and those who have not are only buying from hand to mouth in anticipation of lower prices sooner or later on account of the favorable wheat crop reports that have been coming forward, therefore the volume of business is small and the market is quiet, with sales of car lots of first patents being recorded at $7.80, second patents at $7.30 and strong bakers at $7.10 per barrel in jute bags, ex-track, less 10c per barrel for spot cash.

There has been no change in the condition of the market for winter wheat flour, prices being steady, with a moderate amount of business passing for local account to meet actual wants, and sales of odd cars of choice grades are being made at $6.25 per barrel in second-hand jute bags, ex-track, with smaller quantities selling at $6.35 per barrel ex-store, and winter wheat patents at $6.40 to $6.45 per barrel ex-store in new cotton bags, while white corn flour continues to move slowly at $4.50 per barrel in jute bags, delivered to the trade.

Millfeed.—A recent feature of the millfeed trade has been the firmer feeling prevailing in the market for bran and shorts and prices for car lots were $1 per ton higher, which was attributed to the fact that all the surplus supplies have been cleaned up and that Ontario millers were oversold. There has been a fairly good demand from country buyers, and sales of car lots of bran have been made at $23 and shorts at $25 per ton, including bags, ex-track, with some local millers very firm in their views for Manitoba bran at $25.25, shorts at $27.25 and middlings at $29.25 per ton, including bags, ex-track, less 25c per ton for spot cash. The demand for pure barley meal shows no improvement and prices are unchanged, with broken lots quoted at $36 to $38, while pure grain moullie is quoted at $36 to $38 and feed cornmeal at $32 to $33 per ton, including bags, delivered to the trade.

Grain.—A recent feature of the local exporter grain trade has been the good demand from both Canadian and American exporters for ocean grain room from this port, which resulted in quite an active business being done for July shipment, as all the available space on regular liners sailing from here for all United Kingdom and Continental ports has been booked for that position. This indicates, although there has not been much business done by local exporters in Manitoba spring wheat of late for export account, that there has been a good demand from English importers for other lines, such as American corn and rye, and Canadian oats and barley, and that they as well as United States exporters have done a large business in these grains, especially in corn.

SEED WAREHOUSES NEEDED IN CANADA

Montreal.—If the request formulated in a resolution recently by the Canadian Seed Growers' Association is officially adopted, Canada will have taken a great step in advance of the rest of the world.

The resolution, which was unanimously adopted at the Association's recent annual convention here, was one in favor of providing seed warehouses and cleaning plants in the various provinces of Canada for the purpose of assembling cleaning and selling at wholesale the registered seed grown by members.

The Canadian Seed Growers' Association has a membership of 4,000, these individuals being resident in all parts of the Dominion. All of them are engaged in the production of seed for field crops. At present each individual operates on his own, with the result that no one is thoroughly equipped to do the work, and each sells his product in a retail manner. The proposal is to the effect that these warehouses when established would gather up the product of the members, and be able to offer seed of assured cleanliness, and also to market it under better conditions. The importance of providing the best possible seed lies in the fact that the crop depends upon the quality of the seed.

Mr. George H. Clarke, of Ottawa, was again elected president of the association.

GRAIN SHIPPING BUSINESS ACTIVE

While grain shipments from the port of Montreal have been comparatively light of late a speedy increase in activity is indicated by the large number of steamers due to arrive here shortly under charter to load grain.

Grain is here in plenty to supply their needs, there being approximately seven million bushels in the harbor and Grand Trunk elevators, three million in lake vesse's already here or en route from Port Colborne, and about half a million bushels in railway cars. Twenty-eight lake vessels were in port recently with grain, and fifteen more are reported on the way down from Port Colborne.

At the latter port the steamer Osler discharged 339,000 bushels of corn, while the Sarnian unloaded 147,000 bushels of wheat, and the Collingwood 59,000 bushels of oats and 170,000 of wheat. The ocean vessels due in port to load grain will carry out approximately three and a half million bushels.

QUOTATIONS ON BRAN AND SHORTS

The following nominal quotations on bran and shorts have been reported by the Canadian National Millers' Association, Coristine Building, Montreal, to the United States Customs Authorities as the prices of these commodities now in effect. These prices are the net cash prices in bulk, f.o.b., the mill:

	Bran.	Shorts.
Montreal	$22.50	$24.50
Toronto	22.50	24.50
Port Colborne	18.00	20.00
Fort William	16.00	18.00
Keewatin	15.50	17.50
Winnipeg	18.00	20.00
Moose Jaw	12.00	14.00
Calgary	11.00	12.00

OCEAN RATES ON FLOUR SHIPMENTS

The following ocean freight rates (nominal) from New York on shipments of wheat flour, oatmeal and rolled oats in sacks per 100 pounds are effective as of the 15th July, 1922.

	Wheat Flour	Oat-meal.	Rolled Oats.
	(Canadian funds.)		
United Kingdom ports..	20c	20c	32c
	(American funds.)		
Hamburg	18c	18c	40c
Bremen	19c	19c	40c
Rotterdam	19c	19c	37½c
Amsterdam	19c	19c	37½c
Antwerp	19c	19c	37½c
Havre	23c	23c	37½c
Bordeaux	23c	23c	37½c
Lisbon	32c	32c	...
Copenhagen	25c	25c	45c
Christiania	25c	25c	35c
Gothenburg	25c	25c	45c
Stockholm	27c	27c	45c
Danzig	25c	25c	45c
Helsingfors	28c	28c	45c
Marseilles	35c	35c	65c
Genoa	35c	35c	65c
Naples	35c	35c	65c
Piraeus	25c	...	...
Salonica	25c	...	...
Smyrna	25c	...	...
Constantinople	25c	...	...
Alexandria	25c	...	...

LOCAL GRAIN SHIPMENTS INCREASE

The total amount of grain handled in the port of Montreal so far this year is approximately four million bushels greater than that of last year.

Up to the present time 33,262,864 bushels have been handled. Of this amount the Harbor Commission delivered 25,149,745 bushels and the Grand Trunk 8,113,119 bushels.

So far the year has been very satisfactory. Orders for the movement of grain just now are fairly slow, many of them pending.

The world isn't growing better; it just seems that way because the girls have taken off their goloshes.

MAPLE LEAF COMPANY CUTS DIVIDENDS

Toronto.—Directors of Maple Leaf Milling Company, at a meeting held here recently, declared a dividend for the quarter, payable on July 18, to shareholders of record July 3, of 1¾ per cent. on the preferred and 2 per cent. on common.

In the past, dividends on the common have been at the rate of 12 per cent. per annum. The reduction to the rate of 8 per cent. per annum was foreshadowed in the trend of the market Wednesday, when Maple Leaf common broke sharply.

No change has been made in the dividend rate on preferred stock, which stands at 7 per cent. per annum. At the same meeting the directors re-elected Mr. James Stewart of Winnipeg as president and managing director, with J. S. Barker as vice-president.

Rufus Redd Dogg

Rufus was in a particularly philosophical mood. "Sum people," he volunteered, "get a repytation good 'r bad gen'ally good, thet they don't deserve. Tak' th' case o' Wilt Henroot. 'Bout th' only time Wilt ever saw th' inside o' a meetin' house wuz when he tuk refuge ther fr'm th' revenoo officers oncet. Wilt had a line o' langwidge thet cud make rain fall. It wuz cal'clated t' fracture a corrygated roof, so, ye kin imagine th' excitement wan day when little Sukie Knowles cam' into her mother an' said thet Wilt hed got religion.

"How de ye know thet?" sez her mother, astonished like.

"Well," sez Sukie, "I saw him settin' on th' grass an' he wuz talkin' t' God."

Et sounded queer so Bud Harmon an' I did a little quiet investygation down t' th' grocery t' fin' out how so much good h'd cum t' th' community. Th' truth soon cam' out. Et seems thet Wilt an' a few o' th' boys wuz pitchin' shoes on th' edge o' th' common. Th' match wuz tight an' Wilt wuz standin' over th' peg watchin' th' shots when Cal Mossop thrun a shoe right on Wilt's pet bunion. Wilt flopped down wher he stud an' we wuz tol' thet whut he said sounded like prayers only they wuzn't. Anyways, et broke up th' match an' we're still waitin' t' see Wilt wi' his mane an' tail trimmed an' his black coat on, on the Sabbath.

THE CHICAGO MARKETS

The following table compiled from figures furnished by Messrs. Logan & Bryan, members of the Winnipeg Grain Exchange and the Chicago Board of Trade, C.P.R. Telegraph Chambers, Montreal, show highest price levels recorded on Chicago Board of Trade from June 27, 1922, to July 7, 1922, inclusive.

	June 27	June 28	June 29	June 30	July 1	July 3	July 4	July 5	July 6	July 7
July Wheat	1.13¾	1.14⅜	1.15	1.15½	1.17	1.18	Independence Day—Board of Trade Closed	1.17⅜	1.15½	1.14¼
September Wheat	1.14¾	1.15⅝	1.16¼	1.16⅛	1.16½	1.18⅛		1.17⅜	1.16	1.14
December Wheat	1.17⅞	1.18¾	1.19	1.18¾	1.19¼	1.20½		1.20¼	1.18⅝	1.18½
July Corn	0.62½	0.62⅝	0.62⅝	0.62⅞	0.62¼	0.63⅜		0.64¼	0.63⅝	0.62½
September Corn	0.66¼	0.66⅜	0.66⅜	0.66⅝	0.66¾	0.67		0.68	0.67⅜	0.67¼
December Corn	0.66¼	0.66½	0.66⅜	0.66½	0.66½	0.67		0.67¾	0.66⅞	0.66½
July Oats	0.37¼	0.37⅝	0.37⅝	0.36⅞	0.36¾	0.36½		0.37¼	0.36¾	0.36¾
September Oats	0.39¾	0.40⅜	0.40½	0.39⅝	0.39½	0.38⅞		0.39¼	0.39	0.39¼
December Oats	0.42¼	0.43	0.43⅜	0.42½	0.42⅛	0.42		0.42⅛	0.41¾	0.41½
September Barley	0.60	0.63	0.61	0.61	0.61½	0.61		0.63½	0.63½	0.63⅜
July Rye	0.86⅞	0.87¼	0.87	0.86¼	0.86½	0.87		0.87	0.86	0.86⅛
September Rye	0.87	0.87⅛	0.87⅛	0.87¼	0.87½	0.87½		0.86¾	0.86	0.86

ONTARIO
TORONTO

TORONTO JULY 15TH, 1922

THE TORONTO MARKETS

Flour.—While the flour market has assumed a waiting position, owing mainly to the unsettled action of wheat and the nearness of the new crop, Canadian flour is in slight demand in New York. As yet the market has not been established on a new crop basis and consequently offerings of new flour are being made on old crop quotations, with the result that buyers have not been attracted. The mills have been asking 42 shillings to 42 shillings and 6 pence for Manitobas, but as far as can be learned there have been no sales at these figures, the bids being around 40 shillings to 40 shillings and 6 pence. The situation in Ontario winters is unchanged from conditions prevailing during the past ten days. There is every indication that the winter wheat crop, now coming to maturity, will be a very good one, both as to quality and quantity. It was learned at the grain department of the Toronto Board of Trade that offerings of flour are being made on a basis of 37 shillings without bringing any response, and this price is based on a dollar per bushel for wheat to the farmer. Australian soft flour is being offered at 36 shillings.

Millfeeds.—The millfeed market is inclined to be spotty. During June there was a little demand for bran and a limited demand for shorts. But of late there has been a better demand for both bran and shorts. The heavier feeds are still in good demand. There is no unusually large surplus of millfeeds of any kind as the output has been restricted, mills everywhere running at reduced capacity, due to the dearth of overseas flour orders, and the quiet condition of the Dominion market. The list price for bran is $24.00 and $26.00 for shorts, while white middlings are quoted at from $30.00 to $32.00 and feed flour at $1.75 to $1.90. Single cars have been offered by some of the smaller mills at figures below these quotations, but as the quantity is small it has not affected current prices materially. Some cars of bran and shorts have been offered at $22 and $24.

Grain.—Cutting of fall wheat is in progress in the lower portions of southwestern Ontario and all of the spring grains are very promising. Reports from the West reaching Toronto, although on the whole optimistic, indicate that the critical period will continue for a few weeks yet and a great deal of attention is being given to weather conditions at the present time. While there are no reports of black rust in Western Canada, the fact that some has appeared in the United States wheat area is causing some anxiety as to the possibility of its spread to Canada. Recent advices reaching the city state that in view of a predicted rust scare it would be well to go slow on the short side. For this reason, and also from the fact that buyers are rather anxious to await further weather developments, trade has been rather restricted on the cash grain market in Toronto. Buying of wheat by the millers, locally, continues light and other cereals are being neglected.

AN OLD LANDMARK OF ONTARIO

There are perhaps but few industries in the world over which hovers such an atmosphere of romance as that of flour milling, and in odd nooks and corners in every country there are to be found mill buildings which, while equipped in the most modern manner present in their exterior appearance a reminder of years gone by.

Although Canada, as nations go, is comparatively young, it possesses many flour mills within sight of the century mark. How well the predecessors of those now in the milling industry built may be gauged in an especially striking manner from the excellent state of preservation of the Brooklin, Ont., mill illustrated herewith

The mill is seventy-four years old, having been erected in 1848, almost a decade before Confederation. It is 65 feet in length, 32 feet in width, and has three floors and a basement. As was customary at the period in which the mill was built the foundations are of stone and the walls of brick, upon which the elements have made but little inroads in the intervening years, are two feet thick.

The Wilson Mill at Brooklin, Ont.

The property is at present managed by Mr. Charles Wilson by whom it was acquired in 1919. In 1920 Mr. Wilson determining to leave nothing undone to make his mill one of the best equipped in Ontario installed a Midget Marvel Mill, which was purchased from the manufacturers, the Pollard Manufacturing Company, Ltd., of Niagara Falls, Ont. The brands of flour marketed by the mill are "Marvel Pastry" and "Brooklin Bread," both of which are highly popular.

The energetic and affable owner, Mr. Wilson, is an Englishman, who comes from a family of millers dating back three generations. Until leaving England for Canada in 1908 he was employed in his father's mill at Maidstone, Kent. Upon arrival in Canada he was first employed by Mr. F. L. Green, of Greenwood, as a miller. After some six or seven years he went to Port Colborne and spent five years grinding in the large mill of the Maple Leaf Milling Co. Three brothers are also millers. As Mr. Wilson has four small sons growing up, he should have at least one miller to succeed him

MONTREAL HARBOR COMMISSION IS PREPARED TO HANDLE ALL GRAIN

Kingston, Ont.—It is understood that the members of the Montreal Harbor Commission who were in Kingston for a short time on their way westward recently, have undertaken to handle all grain passing by water through Canada, and have taken over the Government elevators at Port Colborne. They will also handle all the grain in Ontario which finds its way to the various ports along the front. The purpose is to so handle the grain that the Montreal elevators will not be glutted, the cereal being held at various points along the route and then sent forward as required. The commission will return to Kingston very soon to look over conditions here.

A strong effort will be made to have Kingston made the terminal point of the Welland Canal system, so as to handle a great volume of the grain which must go east, and which cannot go in the big vessels through the St. Lawrence canals.

MILLIONS LOST BY GRAIN DIVERSION

From the report of the Special Committee of the Senate in regard to the routing of Canadian grain through American ports, it would appear that the movement of the Canadian wheat crop showed 99,000,000 bushels shipped via Buffalo, while the amount shipped via Georgian Bay and Port Colborne was 32,000,000 bushels. "After careful consideration of all the evidence submitted," says the report, "your committee is of opinion that there exists a most serious condition of affairs with regard to the diversion of the western grain trade in New York and other United States seaports, for export," representing the payment of millions of dollars annually out of this country.

As a result of these conditions the Government is advised:

(1) To cause rates to be granted upon export grain over the Canadian National Railways to Quebec, Montreal, Halifax, St. John and Vancouver, such as would develop trade through the above ports.

(2) As a corollary to the recommendation in paragraph (1), that necessary elevator accommodation should be provided by the Dominion at Canadian ports.

(3) To arrange with the marine underwriters or others in such a way that the marine insurance rates from Canadian seaports be as cheap as from United States seaports.

Winnipeg.—Mr. Edward Parnell, mayor of Winnipeg for the past eighteen months, died in Victoria, B.C., recently after a long illness.

The Modern Sophocles

BACK near the beginning of things, our prehistoric forebears would have perished from the earth if they had not understood the science of reading advertising.

The cavemen didn't know much about underwear, hair tonic or phonographs, but they did have to eat. The one who could follow the tracks of the game he hunted, or read the meaning of a twisted leaf or broken twig, was best off in life.

Then as now, the most consistent reader of advertising was best dressed, best fed and most contented.

There has been something of an evolution in advertising in the last few thousands of years, but the principle is just the same.

The consistent reader of the advertisements is invariably best informed on what to eat and where to get it; what to wear and how much to pay for it; what to do and how to do it. He's up on the most important things in life. Consequently he gets most from life.

Throughout the ages, advertising has done much to make life livable and pleasant. We owe it much.

Let's make the most of it.

SIR GEORGE FOSTER CRITICIZES NEW WHEAT MARKETING LEGISLATION

Ottawa.—Declaring that the bill "was not even a 41st cousin to the legislation which governed the Wheat Board in the war years, or the enabling legislation passed in 1920," Sir George Foster, speaking in the Senate recently on second reading of the Wheat Board Bill, voiced strong objections, and then stated that the Government which had accepted the bill must take the responsibility for its outcome. For the first time in history, Parliament was asked to pass what was absolutely unadulterated class legislation in operation and motives. It was giving the farmers an absolutely watertight compartment for 75 to 80 per cent. of the wheat produced in Canada. If effective, the legislation would raise the price of food in Canada and increase the cost of living to the consumers. The European buyers, Sir George declared, would be kept out of the Canadian market. The bill was the outcome of the situation in the Commons, where the Government was without a majority and had to "jump when Bunty pulled the strings." In this case, Bunty had said that "he wanted rates on wheat and flour reduced and then wheat controlled."

SEND US YOUR NAME

To be listed in the Free Milling Directory of Canadian Flour Mills, managers, superintendents, head and second millers, and engineers.

IF YOU WANT TO BE INCLUDED

We must have your name and other particulars on accompanying form. Kindly fill in and return promptly.

Superintendent .....

Head Miller .....

Second Miller .....

Name of Firm .....

Address .....

Daily Capacity .....

Power Used .....

WESTERN PROVINCES

WINNIPEG

WINNIPEG JULY 15TH. 1922

THE WINNIPEG MARKETS

Flour.—Millers report there is very little change in the situation, export business continuing at a low ebb, and while domestic business is fair, it is only of a hand to mouth variety. On the whole business is rather discouraging and reports do not suggest much improvement for the immediate future. Ordinary export and domestic orders are being filled, but outside of this little or no new business is being received.

The majority of the smaller sized mills throughout the West have closed down until the new crop begins to move and general housecleaning is the order of the day. The larger mills are only running about 50 per cent capacity. Flour prices appear to be slightly mixed, as some millers have made an advance of 50 cents per barrel due to the steadily advancing wheat prices and stiff premiums for the cash article. On the other hand, leading mills report no change in prices, and state that they do not believe that those who are asking higher prices will maintain them very long. The following would appear to be official prices as quoted at Winnipeg. Top patent spring wheat flour $7.30 bbl., seconds $6.70, first clears $6.10, jute, mixed cars, delivered at any point between Fort William and the western boundary of Manitoba. In 98-lb. cotton bags, prices are 20c over the jute basis. Saskatchewan points take 10c under these prices, and from eastern Alberta to the Pacific Coast values rise progressively to $7.60 for top patents at Vancouver and like points. Vancouver Island takes $7.65 for top patents, and Prince Rupert $7.80. For 30 day terms, 10c per bbl. must be added to above prices, and for 60 days, 20c.

Millfeed.—There is a strong demand for millfeeds, especially bran, all through the West, and available stocks are not large. The demand for bran is caused by its use in blending with poison to fight the grasshoppers which are quite numerous in several districts in Saskatchewan and Alberta, but are giving little trouble in Manitoba, where they were largely exterminated last year by the poison route. There has been no change in quotations which are as follows: Bran $20 per ton and shorts $22, in bags, delivered, Winnipeg territory.

Oatmeal.—Trade volume in rolled oats and oatmeal is decidedly dull and featureless. There is a fair inquiry, but the aggregate of business is small. The price of these commodities remains unaltered. Rolled oats are selling at $2.70 and $2.80 in 80 lb. cotton bags, and oatmeal at $3.35 in 98 lb. cotton bags, delivered, Winnipeg territory.

Rye Products.—There is practically no domestic demand for any of the rye products, while the inquiry from exporters induces no business. This market is very quiet and lacks interest. Quotations: best patent flour $7 bbl., in 98 lb. bags; medium $6, dark $5, rye meal $5, delivered, Winnipeg territory.

THE GRAIN MARKETS

Wheat.—The feature to the wheat market during the past couple of weeks, has been the excellent demand for the contract grades of cash wheat from exporters. The chief influence at this time is, of course, the weather conditions over grain growing areas. For a time during the latter part of June, continued hot dry weather caused some apprehension, and then the usual black rust scare, that annually makes its appearance at this time of the year, came and with it brought the usual advance in prices. American markets making substantial gains on July 1, while the local market was closed. The following days, however, brought cool weather with beneficial rains, and on July 6 both American and Canadian markets turned weaker and these favorable reports. At the same time the Liverpool market closed 1¾d lower, and undoubtedly added more bearishness to the somewhat weaker position.

Reports from American winter wheat areas have been somewhat mixed, some advices complaining of much of the crop threshing at less bushels to the acre than previously estimated, while others report good results both in yield and quality. Generally speaking, however, conditions over the Canadian spring wheat and American spring and winter wheat areas continue to be regarded as favorable by the trade. Some reports of grasshopper, chinch bug and other insect damage, have come through from both countries, but on the whole the pests appear to be held pretty well in check.

The high premiums on the contract grades of the cash article, undoubtedly were responsible for the bulk of the strength displayed by the futures. The Greek government placed an order for 1,100,000 bushels of No. 2 Manitobas, while other exporting interests have, as previously mentioned, been excellent buyers of the contract grades. Mixing houses showed a keen interest in the lower grades and advanced the premiums considerably, but they overbought and in trying to resell found the market unable to absorb their offerings, and premiums consequently fell away. Generally speaking trade volume has been good in the cash article and fair in the futures.

Oats.—The oats futures have been firm in sympathy with wheat but trade volume has been rather small. Advices from the east state that oats can be bought cheaper at the seaboard than buying on the exchange and paying shipping charges. Cash oats have been very dull with all grades ranging at a deliverable discount over the July option. This cereal is expected to go into the clearing house in the near future.

Barley.—Barley has been steady in sympathy with the entire grain list. The futures have been generally inactive, while exporters showed some interest in No. 3 C.W. The other grades, however, were apparently not wanted.

Flax.—Canadian crushers have not shown such a keen interest in flax but stocks are so light that they do not burden the market and prices have been generally steady. Trade has not been large in either cash or futures.

Rye.—Exporters have shown a little interest in new crop rye but outside of this the market has been dull and featureless.

NEW WHEAT MARKETING LEGISLATION MAY NOT BECOME OPERATIVE

Edmonton. — If the Wheat Board legislation, which has been approved by the Federal Parliament, depends on final ratification by Saskatchewan and Alberta, as has been said in Commons, there will be no wheat board this year. No special session of the Alberta legislature will be called during the summer months to sanction participation in an inter-provincial wheat board under Dominion Government approval.

This much may be stated on the authority of provincial officials, who have given the matter some thought. Were it possible for the province of Manitoba to enter into an inter-provincial arrangement on Federal wheat marketing as proposed by the Ottawa House at the present time, it is likely that Alberta and Saskatchewan would be willing to take up the proposition. However, the provincial elections in Manitoba make it practically impossible to secure any wheat board co-operation from that province in time to handle this year's crop.

One of the Alberta cabinet ministers, recently, expressed the opinion that the provincial government could not very well undertake to assume a portion of the wheat board burden this year. He cited the case of Manitoba. It would be scarcely feasible, and certainly not advisable, for Saskatchewan and Alberta to attempt to handle the proposition, even with the help of the Dominion. It would be much better to wait until Manitoba could join up with the other prairie provinces. Therefore, it may be said with full authority, that the Alberta Legislature will not be called until the opening of the November session announced by Premier Greenfield during the last session.

MANY NEW VARIETIES OF GRAIN COMING

Ottawa.—Dr. C. E. Saunders, Dominion Cerealist, and an eminent authority in his particular line of study and research, in Pamphlet No. 11, just issued by the Dominion Experimental Farms Branch of the Department of Agriculture, Ottawa, describes sixty-nine new varieties of grains which have stood the test at the various farms and stations of the system, and have proved superior to the older and better-known sorts. Of the sixty-nine, three are of winter wheat, fifteen of spring wheat (early and late ripening), twelve of oats, seventeen of barley (six-rowed and two-rowed), two of winter rye, two of emmer and spelt, nine of field peas, four of field beans, three of flax for seed, two of flax for fibre, and three of buckwheat. Following a brief description, a list is given of the varieties suitable for the different provinces.

The varieties recommended for Ontario are: Winter wheat, Dawson's Golden Chaff and Egyptian Amber; spring wheat, Early Red Fife Ottawa 16, Huron Ottawa 3, Marquis Ottawa 15, and Ruby Ottawa 623; oats, Alaska (very early), Banner Ottawa 49, Gold Rain, O.A.C. No. 72, and Victory; barley, Chinese Ottawa 60 and O.A.C. No. 21, field peas, Arthur Ottawa, 18, and Mackay Ottawa 25; field beans, Navy Ottawa 711, Norwegian Ottawa 710, White Pea and Yellow Six Weeks; buckwheat, rye and silverhull; flax for fibre, Longstem Ottawa 52.

TRADE OPPORTUNITIES

With a view to assisting the Canadian milling trade in the development of a permanent and profitable export business, "Canadian Milling & Grain Journal" publishes in each issue a selected list of trade opportunities, the investigation of which should prove of value. "Canadian Milling & Grain Journal" is taking special pains to ascertain the reliability of each opportunity presented and will gladly furnish any further information regarding them that may be desired.

THE EDITOR.

No. 269.—Mr. B. Gregoir, 9 Due des Tanneurs, Anvers, Belgium, would like to get in touch with Canadian exporters of grains, flours, offals, and all kinds of oil seeds and oil cake.

No. 270.—Messrs. Farquhar & Pearson, 47 Hope St., Glasgow, Scotland, exporters and merchants of grain and cattle feedingstuffs, are anxious to get in touch with Canadian grain exporters.

No. 271.—Messrs. Hornes, Ltd., Carmelite House, Aberdeen, Scotland, are considerable buyers of Canadian flour and would be glad to consider offers from Canadian exporters or their agents in Great Britain. Messrs. Hornes are also produce merchants.

No. 272.—Mrs. Chas. E. Bracant, P.O. Box 69, Port au Spain, Trinidad, would like to get in touch with Canadian mills requiring representation in the British West Indies for the sale of their products.

THE WESTERN MARKETS

The following report furnished by Messrs. Baird and Botterell, 103 Grain Exchange, Winnipeg, shows daily highest price levels from June 27, 1922, to July 7, 1922, inclusive.

	June 27	June 28	June 29	June 30	July 1	July 3	July 4	July 5	July 6	July 7
July Wheat	1.26 3/8	1.26 5/8	1.27 3/8	1.29	Dominion Day—Exchange Closed.	1.30 1/4	1.32 3/8	1.31 5/8	1.30 5/8	1.30 1/4
October Wheat	1.19 3/8	1.20 1/2	1.21 1/2	1.21 3/4		1.22 5/8	1.22 7/8	1.21 7/8	1.21 1/4	1.21
December Wheat	1.16 5/8	1.18 1/8	1.18 7/8	1.19 1/4		1.18 7/8	1.19 1/2	1.18 7/8	1.17 3/4	1.17 1/8
July Flax	2.41 1/2	2.41	2.43 1/2	2.40 1/2		2.42 1/4	2.40 1/4	2.38 1/2	2.37 1/2	2.37 1/4
October Flax	2.19 1/2	2.18 3/8	2.21 1/4	2.19 1/2		2.22	2.21 3/4	2.20 1/2	2.18 1/4	2.18 3/4
October Rye	0.84 1/4	0.87 3/4	0.85	0.85 5/8		0.85 1/2	0.84 3/4	0.84 3/4	0.84 3/8	0.84 1/2
July Barley	0.65 3/4	0.66 1/8	0.66	0.65 5/8		0.65 1/2	0.65 3/4	0.66	0.65 5/8	0.65 3/4
October Barley	0.61 7/8	0.62 1/2	0.62 1/4	0.62		0.62	0.61 5/8	0.61 7/8	0.61 3/4	0.71 1/2
December Barley	0.61	0.61	0.61	0.61		0.61	0.61	0.61	0.61	0.61
July Oats	0.51 1/2	0.51 7/8	0.51 7/8	0.52 1/8		0.53 5/8	0.54	0.53 3/4	0.53 1/2	0.52 7/8
October Oats	0.47 5/8	0.48 1/4	0.48 1/4	0.47 3/8		0.47 5/8	0.47 7/8	0.47 7/8	0.47 3/4	0.47 1/8
December Oats	0.46 3/8	0.46 3/4	0.46 5/8	0.45 3/4		0.45 5/8	0.45 7/8	0.46	0.46	0.46

Foreign Flour and Grain News

WITH available supplies of cash wheat pretty well cleaned up and farmers and dealers holding what stocks they have, local traders are finding it hard to trade in the cash article. From the action of the market it is generally assumed that the seaboard exporter is in a short position and No. 1 Northern advanced recently. No. 2 Northern is practically the same as No. 1, but seems more difficult to buy. No. 3, for the first time in weeks, has been in some demand from exporters of late. Mixing houses are buying No. 4 at a premium advance of from 1 to 3 cents.

That the flour export business generally is in a stagnant condition is reflected in recently compiled statistics which show that during a given week but 92,000 bags were shipped from North American ports as compared with 251,000 bags shipped in the corresponding week of 1921. For the United Kingdom, during the week referred to, the shipments amounted to but 42,000 bags against 110,000 for the same week of 1921, while shipments to the continent totalled 42,000 bags as against 90,000 a year ago. For destinations other than European points shipments totalled but 15,000 bags as against 52,000 for the corresponding period of 1921.

The cause of the decline in shipments would appear to be principally due to a general weakness in the overseas trade. This has been accentuated by falling prices on both wheat and flour which has influenced buyers to do business on but a small scale. The fact, too, that British millers in their campaign to reduce importations of flour both of Canadian and United States manufacture are reported to be selling their own product below its proper value may be making its influence felt.

ARGENTINA.—The weather has been cold and dry, favoring the preparations for wheat, and mail advices state that it is expected that a record area will be cultivated this year as the early conditions were excellent.

FRANCE.—Winter wheat is making good progress, but the outturn is expected to be much below that of last season, the conditions being, on the whole, somewhat unsatisfactory. Temperatures are above the average for the time of year. The condition of the spring crop is normal, but it will soon be in need of moisture. The winter wheat area shows an increase of 670,000 acres, and spring wheat an increase of 186,000 acres.

HOLLAND.—A considerable area has had to be re-sown, owing to drought conditions in autumn and damage in winter.

ITALY.—The weather is fine and warm, but rain is needed, as there is drought damage in the south and the position is unsatisfactory in the north. In the early districts rain, even now, would be too late.

CZECHO-SLOVAKIA. — The crops are below medium. Winter wheat is poor and thin, having been damaged by early frosts. Spring sowing was late in the higher districts. In low lands and sheltered places seeding is finished, and germination has been good, but field work is in arrears.

ROUMANIA.—The latest report speak of unsettled weather and frequent rains alternating with gales and thunderstorms, but plenty of moisture is needed within the next few weeks. Winter wheat is thick and vigorous and a full acreage has been planted.

POLAND.—Both winter and spring wheats have suffered from low temperatures.

NORTH AFRICA.—The outlook is unfavorable owing to the prolonged drought, and in Algeria the crops have been damaged by hailstorms.

INDIA.—The latest reports are most optimistic, and in the Punjab the result of the harvest is said to be above expectations. The International Institute at Rome gives the total crop as 40 per cent. above last year. The final forecasts received so far, covering the Central Provinces and Berar, Bombay and Sind, Bengal and the United Provinces, gives an increase in yield of nearly 800,000 tons.

AUSTRALIA.—In New South Wales the rainfall has been confined to the coastal districts. The South Australian wheat yield is given as 24,947,000 bushels, and prospects are particularly bright. Rains for the first five months are half an inch in excess of the average.

CHINA.—The president of the Chinese Chamber of Commerce recently stated that, quantity for quantity, Canadian wheat furnished 20 per cent. more flour than Chinese wheat. Native methods of cultivation are laborious, inefficient and wasteful. Great improvement must be made, not only in these respects, but in the development of better wheat varieties.

In normal years China produces about 200,000,000 bushels of wheat, and is an exporter. The quantity that left the country in 1920 was 20,000,000 bushels, which was nearly double the 1919 figure, and five times as great as in 1918. The principal purchasers of Chinese wheat last year were Great Britain and Japan.

INDIA.—An agricultural expert in the London Observer concludes that no exports of grain may be expected from Russia for five years. He points out that from 1909 to 1914 aggregate yields of wheat and rye were extraordinarily large, and that under the best of pre-war conditions the exports of wheat and rye taken together seldom exceeded ten per cent. of their total yields. Though no statistics are available to support with exactitude the opinion there can be little doubt but that the occupation in 1917 of the large estates by the peasants resulted in a considerable reduction in the size of crops. The reduction in sown areas has been furthered by the Soviet policy of grain requisitioning. Almost complete exhaustion of stocks is the result.

GERMANY.—The weather has turned fine and warm, and there is already a notable improvement in the condition of the plants. Growth, however, is still very backward.

SPAIN—After a period of rough, stormy weather, there has recently been a welcome return to warmth and sunshine. Considerable improvement in the condition of the plants is already noticeable, but growth is backward. There is some complaint of lack of moisture.

The Elevator Operator

What Kind Will You Build?

What kind of an elevator will you build? What material, capacity, style of construction and equipment are best suited to the needs of your business? All these and many more questions of prime importance confront the prospective builder.

As to the type of construction, whether fireproof or wood, the selection may depend on the amount of money available. But the price paid is not the actual cost in any kind of a plant. The actual cost appears after operation is underway. If the plant has been badly designed or poorly built and the equipment improperly installed, the expense of replacements, repairs, and extra labor necessitated by these inconvenient defects will soon increase the first cost.

Cribbed elevators have been built for fifty years and are still being built, but their day is drawing to a close. Just as the gasoline engine and the electric motor have entirely replaced the old blind horse and sweep, so fireproof elevators are fast replacing the wooden plants. It is doubtful wisdom to invest much money in a working plant which may be destroyed any hour with a consequent loss of business and impairment of capital.

Conservation of food is a vital matter, especially in these days when people are dying of starvation in so many countries, not by thousands but by millions. It is more than probable that public sentiment will soon crystalize into statutes making it unlawful to store or handle food products in combustible structures.

REINFORCED CONCRETE EXCELS ALL MATERIALS

Of the materials used in fireproof construction, brick, tile, and steel have all been tried and found inferior in strength, fire resistance, water and weather proof qualities. Reinforced concrete excels all materials in ease of manipulation to secure the desired arrangements of bins and working spaces. Concrete is not only fireproof but is watertight, rat proof and sanitary, all important points in grain storage. Its most important structural quality is the fact that it actually grows stronger with age, thus eliminating depreciation.

The steel reinforcement in concrete is absolutely protected against corrosion or slippage, whereas in brick or tile work, the rods, wires or bands are only protected by thin mortar joints and in most cases it will be found that this mortar is not a pure Portland cement mortar, but that lime has been used to make it work easier.

The fact that for the past ten years, all the large terminal elevators, storage tanks and the frames and floors of mills and warehouses have been built of reinforced concrete should be sufficient evidence of the superiority of this material.

As to the comparative cost of concrete and wood, while the first cost of the concrete elevator will ordinarily be greater than the usual wooden building, where there is a large amount of equipment and elaborate and expensive treatment in finish and trim in elevator and office in the wooden elevator, the difference in cost is not so great. It is questionable if so much costly machinery should be housed in an inflammable structure or that it is advisable to go to so much expense for finish in a wooden elevator that may soon burn.

Operating Costs are Lower

The operating costs with respect to insurance, depreciation, upkeep, labor, wastage of grain, safety and comfort of employees, are so much less than in the wood elevator that the savings will not only pay big interest, but will refund the higher cost in a short term of years and thereafter constitute a profit. I have not taken into account the value of the immunity secured against loss of business through fire or storm damage.

The concrete elevator is a permanent structure and must be designed, not only for present requirements, but with some thought for future needs. Concrete elevators are built high for reasons of economy in construction and as a consequence, they usually overtop all other buildings and may be seen for miles. It is a crime to build a monstrosity which will be an eye-sore for all time. Is it wise for an elevator company, in order to save a few thousand dollars, to decide on an elevator with cheapness as the first consideration rather than workability and appearance? Such a decision will be a lasting stigma on the good sense and taste of those responsible for the erection.

Many builders, in order to make the lowest possible price, sacrifice appearance, convenience and efficiency in bin arrangement. In many cases the machinery installed has been done by another contractor who had to take the building as he found it. One can readily understand that the result was anything but satisfactory.

THE CHINESE WHEAT SITUATION

Shanghai. — Recent advices from the what-growing area of Central and North China go to show that the wheat crop of 1922 is in a fairly good condition, and the yield will probably amount to 75 per cent of normal or perhaps a little better. Speculative business is being done in the new crop for future delivery at about tls. 3.50 per picul, approximately $1.20 per bushel Canadian currency. Foreign wheat, American and Australian, is quoted much below these figures c.i.f., so that importations have practically ceased, and all of the twenty or more mills in Shanghai and vicinity, with the exception of two or three, have shut down until the arrival of the new China wheat in July. Recent quotations of United States wheat are: White Walla Walla, $47 United States currency per ton of 2,000 pounds c.i.f. Shanghai; and Red American, $48 United States currency per ton c.i.f. This works out at about tls 4.50 per picul of 133-1/3 pounds of about $1.55 per bushel Canadian currency. Australian wheat, which is quoted a little lower, is still much higher in price than Chinese millers can afford to pay. Canadian wheat is not quoted.

The Elevator Operator

PROSPECT OF BIG CROP HASTENING ENLARGEMENT OF WINNIPEG EXCHANGE

Winnipeg.—The decision of the Winnipeg Grain Exchange to spend $250,000 adding to the height of the exchange building, is regarded as an indication that the members are feeling assured that western Canada is in for a big crop this year. There has been no setback as in other years at this time. The country has weathered the cold week, has fought off the grasshopper and the cut worm, has plenty of moisture even in localities where they have had dry seasons for the past five years, and the grain is looking fine everywhere. Within seven weeks the harvest will be on in many parts. As Mr. W. A. Matheson, the retiring general manager of the Lake of the Woods Co., said: "It does not make any difference what the price is for our wheat this fall; it is the quantity that will count. Personally I hope the price will be high, but if we have a 300,000,000 bushel crop it will be the greatest asset for Canada that one could wish. We had a larger crop than that once before; and we will have it again."

The plans of the Grain Exchange are to raise one of the wings up three stories by building three stories under the seven stories, and making the entire structures ten stories in height. The contract has been let and it will be then one of the largest buildings on the continent devoted to the grain trade.

WORK COMMENCED ON NEW PATERSON GRAIN ELEVATOR AT FORT WILLIAM

Fort William.—The Stewart McKenzie Co., contractors, have commenced driving piles for the new grain elevator addition to be erected upon the west side of elevator O of the N. M. Paterson Grain Company. The new storage house will be of one million bushels capacity and will be served by the present working house of elevator O.

The Fegles Construction Co., Ltd., of Fort William, have secured the contract for the construction of the building and will commence pouring the concrete foundations as soon as the contractor has finished driving the 1,500 piles required. According to Mr. Paterson the new elevator will be finished before the end of September.

The structure will be of concrete construction and will be modern in every way. Material is being rapidly assembled upon the site. Excavation work has already been commenced.

THE WINNIPEG GRAIN EXCHANGE

Some details concerning the extensions to which appeared on page 27, "Canadian Milling & Grain Journal," issue of July 1, 1922. The original seven story structure seen in the picture is to be raised to ten stories to conform to the newer part of the building. The cost will be approximately a quarter of a million dollars.

Mr. H. E. Van Scoyoc, sales manager of the Canada Cement Company, Ltd., was elected president of the Montreal Publicity Association at the recent annual meeting of that body.

Late Foreign News

GREAT BRITAIN.—There continues a very poor enquiry for flour of all descriptions, and prices recently decline 1s. (0.22½) for home-milled and 6d. (0.11¼) to 2s. (0.45) lower for foreign. The market has been affected by the decline in wheat, as bakers are holding off in hope of a further reduction. Parcels for shipment are 6d. (0.11¼) to 2s. (0.45) lower. Manitoba Patents, June, are offered at 41s. ($9.02) to 44s. ($9.68) and Kansas Patents 42s. ($9.20), but there is practically nothing going forward.

The Proper Handling of Rolls

The breaking of wheat and reduction of middlings mean real success in milling, and are of the utmost importance. To get all there is out of a plant it is absolutely necessary to break and reduce right at the very start and not leave 70 per cent of the work to be done at the tail; for then both yield and quality must suffer.

Of course, there is a preliminary essential, to have the wheat going to rolls correctly tempered by water, steam or heat, according to requirements, as it is important in the production of quality flour.

The break corrugations ought to be sharp in order that good dry middlings can be made with a minimum of break flour. When the corrugations become dull they make mushy, dusty chop, and cause all the stock to be mushy, hard to bolt and the middlings sluggish, very difficult to bolt free from dust and almost impossible to grade and purify.

Every roll should be in perfect repair, level on the floor with feeders feeding in an even sheet the entire length of the roll and the rolls in perfect tram and alignment, or correct grinding is not possible. Belts ought to be in perfect repair, endless, with no slip, in order to maintain a steady pull and to hold the differential—otherwise there is an invariable falling off in the yield.

In regard to breaking on a four-break mill in order to obtain the highest results all rolls should have sharp corrugations yet with their razor edge worn off in order to protect the bran from being cut into shreds, as often happens.

First break, wheat carrying approximately 14 per cent moisture; 12 V corrugations per inch; 50 degrees slant; 9-inch roll, fast running 500 r.p.m.; spiral 1-inch per foot; differential 2 to 1; breaking down about two-fifths or until the stock appears two-fifths, the middlings sharp and lively with the appearance of dry sand.

Reduction of Middlings

Never get down until the large middlings are mashed after being made. Great harm will result from making too many No. 3 and 4 middlings that pass the first and second middlings rolls without being reduced. Whenever a large quantity of fine middlings is made by the mashing down process on the break rolls it sends too much pure stock to the tail of the mill before there has been an opportunity to reduce it to flour.

It is most important to make all the large middlings possible for germ and first middlings rolls, then come down on them until they are smooth and mealy, which sends a large proportion of them to flour of a high quality. About 30 per cent of the prettiest middlings should result from the correct reduction of the germ stock. These go to first middlings rolls and in this way the germ and first middlings rolls on a four-break, six reduction mill will send about 50 per cent of all flour to the packer, and that flour will be granular and of a creamy white bloom, hard to beat.

The second break ought to have 16 cuts per inch, V shape, about 45 degrees slope, 9-inch roll, fast roll running 500 r.p.m., spiral 1-inch per foot, differential 2 to 1. Break down until about half the stock appears middlings in passing it to and fro, with the stock as lively as it is possible to obtain, and with the bran not shaped.

The third break should have 20 V cuts, same condition as the first and second breaks, with the exception of the differential which should be 2½ to 1. Break until the bran is in shape to be bran and as broad as can be made.

This break is the all important one, as the bran must be shaped but the corrugation must not get too close to it to scrape it or all the middlings on third break will be mashed to powder, unfit for purification, and will go to fourth and fifth middlings rolls instead of to third.

THE DUTCH MILLING INDUSTRY

Before the war, the Dutch millers normally ground about 60 per cent. of the country's supply of flour and meal, and during the war they supplied all the breadstuffs used. In the latter part of 1920, the milling industry was practically free from Government control, and American flour was imported in increasing quantities. The downward course of prices in the United States during the past year, however, has made it difficult for Dutch importers to buy flour in the United States in such a way as to avoid loss in the course of the two months or so required for the placing and filling of the order.

The Dutch mills, on the other hand, have been in a position to do spot business, thus enabling the dealer to avoid risks growing out of declining prices abroad and constant fluctuations in Dutch-American exchange. The millers themselves have been affected by the falling prices for wheat and by the exchange situation, but they are in a better position to protect themselves from loss than the importers, who deal more directly with the consumers.

There has been a greatly increased export trade in flour of all kinds from the Netherlands to various near-by countries, especially Germany, Czecho-Slovakia, and Austria. This trade, which has included not only flour from Dutch mills but also a considerable portion of the imports from the United States, should not be confused with the transit trade, as it represents a general movement that has been greatly furthered by the facility with which sales of flour from stocks in the Netherlands to those countries with debased currencies can be financed. The trade during the year was also marked by a tendency to use imported American flour and ship the output of the Dutch mills.

The Canadian National Millers' Association headquarters which were formerly located in Rooms 1-4, Coristine Building, Montreal, have been removed to Room 204 in the same building. Visiting millers are cordially invited to call when in the city.

Elevator, Mill & Personal Notes

Toronto.—The Galt Flour Mills, Limited, has been organized and authorized to engage in a general milling and grain business. The head office of the company will be in Galt and the capital stock is placed at $40,000. The provisional directors are Messrs. T. R. Ferguson, G. R. Sproat, J. C. Thomson, C. H. Donley, Harcourt Ferguson and E. C. Snelgrove.

Regina.—The total grain handled by the Saskatchewan Co-operative Grain Elevator Company from the commencement of the crop movement in the autumn of 1921 to May 31, 1922, was 33,133,085 bushels. In addition about one million and a half bushels were handled as "platform shipments." In the crop shipping season of 1920-21 the total grain handled was 26,195,943 bushels.

Portage la Prairie.—The loss through destruction of three elevators and mills here by fire during the recent storm is placed at $400,000.

Mr. C. H. Smith, of Messrs. McLeod & Smith, Listowel, Ont., was a recent caller on the milling and grain trade in Toronto.

Mr. Charles Ritz, eastern manager for the Robin Hood Mills, at Montreal, was a business visitor in Toronto recently.

Mr. R. M. Pincomb, of the Strathroy Flour Mills, and Mr. A. H. Balfour, of the Brampton Milling Company, Ltd., were recent business visitors to Toronto.

Mr. F. B. Ham, of Messrs. C. R. Vannatter & Co., Ltd., Dominion Bank Building, Toronto, returned recently from a business trip through Western Ontario.

Mr. R. A. Thompson, of Lynden, president of the Dominion Millers' Association, was a recent caller at the head office of the Association in Toronto.

Mr. C. B. Watts, secretary of the Dominion Millers' Association, Toronto, and Mrs. Watts, sailed recently from Montreal on the S.S. Montcalm, for England where they will spend a couple of months vacation. Mr. Watts has a son in London whom they will visit.

Mr. M. A. Pollock, manager of the Canadian Flour Export Company, and Mr. J. G. Wolverton, of the Wolverton Milling Company, Ltd., left recently on a motor trip to Havelock where they will spend some time fishing on Belmont Lake.

Mr. W. J. Baldwin, ex-mayor of Aurora, and a prominent miller of that town, spent a few days in Toronto recently.

Mr. Gordon Hunt, of Messrs. Hunt Brothers, millers, London, Ont., spent a few days in Toronto recently on his return from a trip up the St. Lawrence.

Mr. N. J. Breen, of the Lake of the Woods Milling Co., has returned from Montreal, and will assume the position of Western manager of his company on July 15, when Mr. Matheson will retire. Mr. Booth will succeed Mr. Breen and will be in charge of the flour department.

W. R. Bawlf, president of the N. Bawlf Grain Co., is holidaying with his family at Detroit Lakes, Minnesota.

J. E. Hall, president Vancouver Milling & Grain Co., Ltd., was in Winnipeg last week. While here he expressed a favorable opinion on the future of Vancouver as a grain port. He thinks that trade through that port will grow, especially if freight rates are adjusted in such a way as to equalize the westbound rate with that to Fort William.

WELL KNOWN FLOUR MAN

Owing to recent changes in the management of the Maple Leaf Milling Co., Ltd., at the head office, Toronto, Mr. H. E. Rains, whose photo appears below, will now go into business on his own account. Mr. Rains, with offices in Halifax, has been sole sales representative for the Maple Leaf Milling Co., Ltd., for Nova Scotia, Prince Edward Island and Newfoundland for several years. He not only built up a splendid trade for "Cream of the West" flour in Eastern Canada, but extended the company's business in other lands, particularly to the British West Indies, having charge of the export business from Halifax. Canadian millers, Mr. Rains thinks, could get more business from the B. W. I. and predicts greater sales there if more aggressiveness is shown. On his last trip to that market he found the United States milling representatives keenly after the trade. With Canadian preference and better flour, Mr. Rains states more business should be done there by Canadians.

MR. H. E. RAINS

To get a closer knowledge of affairs, Mr. Rains has been calling on Ontario and western mills, motoring as far as Montreal via the White Mountains.

Mr. Rains came to Canada from England at an early age. He has a wide trade connection in the Eastern Provinces and that he will continue to sell flour, and lots of it is a certainty.

Mr. H. M. Evans, Halifax, N.S., a well known financial broker in the east, visited Montreal recently in connection with some flour and grain deals. Mr. Evans, in company with Mr. H. E. Rains, of the same city, motored up through the White Mountains.

THE PRACTICAL MILLER

THE CLEANING AND PREPARATION OF SOFT WINTER WHEAT FOR MILLING

Here is the advice of a practical miller for cleaning and handling Soft Winter wheat. First of all, of course, he says, the wheat should be thoroughly cleaned on a milling separator. After this is done, it should be treated on an upright friction scourer; any good upright friction machine will do the work if it is supplied with a regulating valve at the discharge end.

Place a barrel or other vessel over head of the friction scourer, that will hold a quantity of water. The water in this vessel should be heated so it is sufficiently warm (it can be heated with various appliances as the occasion may demand); arrange so the water can be put in the top of the scourer with the grain. Use only sufficient water so that the machine will loosen all the rough red bran of the berry. Your judgment will soon tell you how much water and how much pressure you should have on the scourer.

In any case there must not be enough pressure to abrase the inner or main bran; if you do not adhere to this strictly you will not get the results. After the grain is thoroughly treated on this friction scourer it can be further treated on a horizontal scourer or brush machine. Then the wheat is ready to be spouted to first break.

In no case to get the best results must there be a great deal of grain retained in the stock bin over the first break roll. The idea here is not to allow the wet process to get beyond the inner bran.

If these instructions are followed you will find the bran easily cleaned, and any good miller can produce a very white product, and very large clean bran. The object of this treatment is to remove all the impurities possible before you start milling. If a man is a real miller and will carry forward the above instructions and will prepare his grain as a miller should, he will be wonderfully benefited. This system will apply particularly well to short system, concentrated mills.

This is not a new and untried idea. There are quite a few of the old school millers who are using the system with marked results and producing a fine white flour with it.

EXPERIMENTAL FLOURS

Four or five years ago it seemed likely that the country was to have a lot of new flours of unusual colors and flavors, made from fruits and vegetables. These flours were the natural sequence of experiments in dehydration, an art almost unknown, or at least undeveloped, until a few years ago. It is but an additional and natural step to make flour from dehydrated fruit or vegetables, as an aid to marketing the salvaged food.

But the anticipated flood of these flours and meals has not appeared. True, some are on the market, like potato flour, pumpkin flour, bean and pea flours, with several others that so far have appeared only in the newspapers.

All of these flours are entirely practicable up to a certain point, if made from dehydrated products. Some of them, like potato flour, are well-known products, although new in this country. There may be difficulties in the way of commercializing some of the fruit and vegetable products; but all of them are fairly realizable and practicable. Flours with flavors and colors of their own are food novelties that may or may not recommend themselves to public taste.

FLOUR MILLING IN LETVIA

Letvia is one of the five new republics that have been constructed out of the western frontier of Russia, and consists substantially of the city of Riga with a population of 300,000, and the territory around the Gulf of Riga, with perhaps 900,000 additional population. Sixty-five per cent of the people of Riga, Mittau and other cities eat white bread as do 10 per cent of the rural population. In general the latter use black bread from preference, believing it is more wholesome than white bread.

Riga imports almost 10,000 barrels of white flour per month, which would indicate that the consumption is now about the same as before the war. Three-fourths of the imports are "patent" and the rest of cheaper grades. Practically all of the best white flour consumed is imported from Canada and the United States. The domestic wheat crop is small—less than half a million bushels in 1920, and is practically all ground in the country mills. This would make only about half a bushel for each inhabitant of the rural population, which eats rye bread instead of wheat bread.

There are three mills in Riga which make wheat flour; and while they do not equal the imported patent flour, they turn out a flour as good as the medium grades; and as the tariff is so adjusted as to favor the importation of wheat rather than of flour, these same mills can sell their product cheaper than the imported flour of the same grade. The tariff on imported flour amounts to over 4 cents a pound or more than $8 per barrel. While this tariff permits the importation and sale of the highest grades of flour, it makes it difficult to import clears, since these come into competition with the domestic flours which can be made from imported wheat that pays a duty of only one cent a pound.

MENDING BROKEN TRANSMISSION BELTS

When a belt breaks, the parting place should be examined. If it is just a wrenching from one side of the connecting hook, either cleanly pulled off or broken at the edge of the hook; the same belt may be used immediately again. A short piece can be trimmed from the detached end so that the teeth of the hook can have a full, fresh bite. If, however, the break is caused by the opening of a lap, or if the belt is an old one, and furthermore, if it shows cracks that will develop into breaks, a spare belt can be put on. Always have the hook in place on one end of the spare belt.

THE PRACTICAL MILLER

A HOME-MADE TOOL CHEST

The practical miller who has interest enough in his employer's mill to keep a kit of tools of his own for the sole purpose of keeping the other fellow's mill in repair should not be asked or imposed upon by the help of the mill for the loan and carrying off of the tools.

A handy tool chest can be made by placing a cupboard above the work bench and so arranged that it will accommodate the tools owned by the miller.

The back and side walls of this chest are provided with pegs and hooks for holding tools which can be hung up, while the bottom is for planes, etc.

A chest of this kind is desired because it is handy; when the doors are opened all tools are in plain sight, no pushing and pulling trays and no pounding together of tools. Even the doors are provided with pegs so that the entire inside space of the chest is occupied by tools. If the miller will keep his tools in a chest of this kind instead of hanging up on the walls over the bench he can lock the chest when not working at the bench, and he will have the satisfaction of knowing that when he wants to use a tool he can find it, and that it will not be dulled by being abused by those who seem to think that the miller's tools are especially for the use of others.

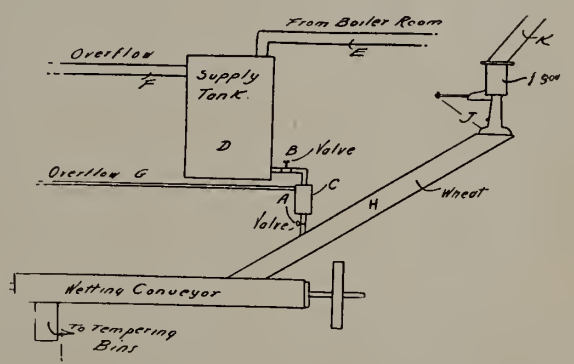
No matter whether the miller uses his own tools or whether they are supplied by the employer, it is hard to see why any but the miller should use them, unless it so happens that some one besides the miller does the repair work, which is sometimes the case. At times the second miller does the repair work, but whoever must use the tools should have them for his use only.

MERITS OF HOME-MADE AND BAKERS BREAD

A great deal has been said and written about the differences between bakers' bread and the home-made product, but so far there appears to be no approach to uniformity of opinion. The bakers on the one hand generally claim that, obviously, a professional breadmaker devoting his whole time to the one problem and possessing the latest knowledge as well as improved machinery and appliances must be able to turn out a better as well as a cheaper product than the relatively inexperienced operator under ordinary home conditions. The majority of people, on the other hand, unconvinced by these arguments, assert that not only is home-made bread superior in flavor but that it is more wholesome as well. They even go so far as to accuse the bakers of adding a number of more or less objectionable chemicals to the bread—apparently for no other purpose than the joy of watching their customers die off with alarming rapidity. A lurid pamphlet issued a few years ago on this subject speaks of the crooked manoeuvres and the great conspiracy of those thieves, the millers and bakers, aided by the subsidized press. The parties concerned are said to add to the flour alum, talc, boric acid, salicylic acid, gypsum, sulphate of copper and other deleterious ingredients. Such statements would be all right in a comic opera, but they are out of place in a serious publication. Flour in Canada is not adulterated, and the charge that bakers' bread is fundamentally less wholesome or nourishing than the home-made product may be dismissed at once as ridiculous. The bakers are both too honest and too reasonable to indulge in the sport of killing off their own customers. Very frequently bakers' bread contains, when fresh, too large a proportion of water, on account of which it may sometimes cause indigestion. The same may occasionally be true of home-made bread. In either case one has only to keep the bread a couple of days in order to bring about a great improvement. Water is the only chemical compound at all likely to be found in dangerous quantities in bread.

AN AUTOMATIC DAMPENING DEVICE

The accompanying sketch shows an automatic dampening device which has proved very effective for the writer, and gives a uniform temper on wheat. A is a valve regulating amount of water put on wheat, C is a galvanized cup holding one half gallon of water, G is overflow from cup C, B is valve regulating amount of water to cup C, D is supply tank, E is supply pipe from boiler room, and F is overflow from supply tank D.



By having an overflow in wheat spout K above feed governor, leading back to milling bin, enough wheat can be turned on to exceed amount set for governor so that the stream going to wetting conveyor will be uniform. By having overflow G on cup C, enough water can be turned on at B to exceed amount passing through valve A, the result of which will be a uniform stream of water not affected by the lowering of the water in the supply tank D, which should be large enough for a 24-hour run. Given wheat that is free from straw and sticks, good results may be expected.

Toronto.—The James Goldie Co., Limited, merchant millers, Guelph, Ont., report that their plant has been operating to full capacity up to quite lately. Recently, however, business has been somewhat slack, partly owing to weaker markets and buyers' hesitancy in making commitments until a steadier situation is apparent.

THE PRACTICAL MILLER

COST ACCOUNTING IN SMALL MILLS

In amplification of the articles which have been published in past issues on the subject of cost accounting in small milling plants, "Canadian Milling & Grain Journal" reproduces herewith a cost sheet suitable for 150-barrel mills. The sheet is based on a differential for every ten barrels, and covers operations for a run of 24 hours to one of 6½ hours.

The Administration Account covers officers' salaries, and bad accounts in the sheet shown are based on an assumed average for 10 years. The power costs refer to electricity, while the taxes covered include federal, provincial and municipal. Depreciation is figured at 25 per cent. on motor or other trucks, 2 per cent. on buildings, 10 per cent. on office fixtures and 4 per cent. on machinery.

There is no question of such importance to small millers as the cost of producing their product, and millers with 150-barrel, or smaller plants, should check over a cost sheet like that shown herewith with their own. Mistakes in production costs are fatal in these times of close competition and small profits.

OVERHEATING INJURES FLOUR

Experiments show that flour heated over 110 degrees Fahrenheit is injured, and that if the bakers storeroom is directly over his ovens, this temperature is often reached. Furthermore, it is evident that flour kept under these conditions is likely to give more or less trouble, depending upon the temperature and the length of time it is subjected to overheating. The ideal temperature of flour is from 65 to 75 degrees. Laboratory tests show that flour may be stored with apparent safety up to 110 degrees, but above that point is injured.

Photographs of loaves baked from flour subjected to a temperature of 150 degrees for six days, and a loaf baked from the same flour kept at a temperature of 75 degrees with exactly the same handling and weight, show a marked difference in the size of the loaf. A careful examination by skilled chemists shows that overheated flour is affected mainly in the gluten. When washing the gluten from such a flour the water becomes very foamy, as if soap had been added, and the elasticity which gluten imparts is notably absent, to the extent that it becomes difficult to ball up, as is customary.

	Manufacturing Cost Per Barrel											
Barrels, per day.....	150	140	130	120	110	100	90	80	70	60	50	40
Administration	.123	.133	.143	.150	.169	.186	.206	.232	.266	.310	.373	.466
Bad accounts	.002	.002.	002	.003	.003	.003	.004	.004	.005	.006	.006	.009
Expense	.040	.043	.043	.050	.060	.060	.067	.075	.086	.100	.121	.151
Gasoline	.011	.012	.013	.014	.015	.017	.018	.021	.024	.028	.034	.042
Interest	.011	.012	.013	.014	.015	.017	.019	.020	.024	.028	.024	.042
Insurance	.014	.015	.016	.018	.019	.021	.025	.028	.031	.035	.045	.054
Oil	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.004	.006
Power	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20
Pay roll	.136	.138	.14	.142	.145	.19	.195	.20	.233	.277	.334	.417
Repairs	.010	.011	.011	.012	.014	.015	.017	.019	.021	.025	.030	.038
Taxes	.012	.012	.016	.019	.02	.021	.021	.022	.026	.029	.042	.052
Depreciation	.028	.029	.03	.032	.034	.04	.046	.052	.059	.069	.084	.104
Cost per barrel...	.588	.608	.628	.655	.695	.735	.819	.874	.975	1.108	1.297	1.581

BAUER ATTRITION MILLS POPULAR

There are many Canadian millers using Bauer Ball-Bearing Attrition Mills, made by The Bauer Bros. Co., 544 Bauer Building, Springfield, Ohio, U.S.A. The manufacturers invite readers of Canadian Milling & Grain Journal to send for this list in order that those interested in Attrition Mills may investigate for themselves whether or not the Bauer Mills meet the conditions required by Canadian Millers. This is an honest and above-board policy of The Bauer Bros. Co., which is perfectly willing to let the merits of its product be decided by the actual experience of the user.

For forty-four years — the manufacturers of these mills having been established in 1878—this company has devoted its time to the perfection of its product. Their engineers are men of note in this particular field and their services are at the disposal of any of our readers who have grinding problems to solve. Address, Engineering Department, The Bauer Bros. Co., 544 Bauer Bldg., Springfield, Ohio, and they will be glad to afford any assistance in their power without cost or obligation.

LOADING FLOUR ON CARS

A method of loading flour in sacks on cars has been tried in the Northwest and is said to obviate some of the disadvantages of other methods, such as shifting caused by bumping in the yards. The method in question is called the "key loading" system and is simple enough.

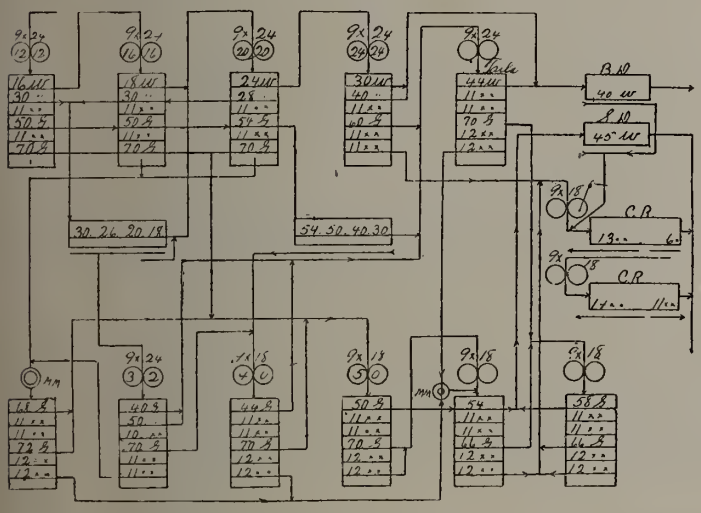
In this method, sacks of flour are placed on the floor of the box car in the old way, the rows running the whole length of the car. The second sack from the end is removed and set partially on end in the same place. When placed in this way, the sacks are like the side of a wedge, the sacks are piled on top, and after skipping a row, the same plan is adopted in the third row. This load cannot shift and the up-ended sacks withstand the jolt and are often set tighter in place as the jolting gets stronger. It is stated that one railroad has tried this "key loading" system, and in a week's shipments reported that no sacks were ripped or torn and no loss was reported on any shipment. It is said that local shipments can be made on this system and that as few as 10 sacks can be successfully loaded this way.

THE PRACTICAL MILLER

AN INTERESTING FOUR BREAK BIN REDUCTION FLOW SHEET

"To the miller who loves his calling, the miller who has a desire to advance in his calling a flow sheet is always interesting. There are perhaps as many ideas as to how a mill with a given list of machines should be flowed as there are mills and millers," writes Mr. Clay C. Spence, a well-known American milling authority in a recent issue of The Dixie Miller.

"The flow herewith is not presented as showing a system of perfection; it is not presented as the writer's ideal flow but is presented because we have the word of those who know what the mill flowed as here shown is capable of doing. It is claimed that the capacity has gone over 200 bbls., that the yield runs at 4.26 to 4.28 on clean wheat 100% flour selling with the best flour on the market as turned out by the best and largest mills in the country. This it seems is a big claim.



"While I do not approve of the flow in every particular as it is shown, I must admit that it shows milling ability. One thing of special interest, the middlings mills are working on clean stock. This in itself is worthy of mention and consideration. Also, you will notice that the range of flouring cloths is not as large as is often used and that when the tail of the mill is reached, fine cloths are used.

"I want to ask the employer how much his mill and miller would be worth to him if he could make a barrel of flour from 4.30 wheat which would sell with the best flour on the market. Understand that this mill does not disclose any special high class or fancy equipment, just plain every day machinery such as any mill can afford to have and must have. If the yield, capacity, and quality claims as above given are true, then all are willing to confess that it is a wonderful achievement.

"I will say that I know of a small mill of three breaks and six reductions which is milling on a yield between 4.30 and 4.40 making a straight flour which sells in competition with the big mills patents which it is claimed are from 75% to 85% patent of all flour produced. I know that the flour from this mill makes most beautiful bread in every particular and that the flour gives splendid results in all kinds of baking and uses. To make a 100% flour on 4.30 to 4.40 yield the wheat testing 58lb. and less the mill must be in good condition and in the hands of a miller who has devoted more real study to the art and science of flour milling than very many men are willing to devote.

"Remember that it takes real skill and ability to run a mill even if it is in the best of condition. It takes even more skill to put the mill which is not in good condition where it can compete. If your mill is not right have it made right; the sooner the better. It costs money to do this but it will cost more not to do it.

WASHING VS. DRY CLEANING OF WHEAT

The washing of wheat has many advantages over dry cleaning, though the expense is sometimes too great to allow its use, unless it be on smutty wheat. There is probably no other method that will condition wheat that is contaminated with smut.

But even when a washer is used it would seem that some dry cleaning would also be beneficial. Whereas, the real purpose of both dry-cleaning and washing is the removal of extraneous dirt, it is also very desirable to remove the beards from the end of the berry as thoroughly as possible. Although a washer may remove some of the dirt from among these hairs, it will not take off the hairs, themselves. If these beards remain on the berry it is inevitable that some of them will be broken off by the break rolls. Once mixed with the product of reduction they are very hard to get rid of.

A microscopical examination will often disclose pieces of beards in even short patent flour, and in break-flours they are sometimes plentiful.

Is Scouring Overdone?

Some millers believe that scouring is often carried too far. They think that the bran-coat may be worn so thin that it will break easily leaving nothing to "mill against." While it is undoubtedly true that the purpose of scouring is to remove dirt from the wheat, and not the removal of the bran-coat, itself, it does not appear that there is much danger of wearing out the bran. From the standpoint of economy, wheat is probably scoured too much in some instances.

The difficulty is that the friction of the wheat berry against the scouring case seems to be mostly on the sides of the grain. The beards at the end will still be in evidence when the sides of the berry are highly polished. Even the "peelers," or "hullers," sometimes used fail to get all the beards, though they sometimes peel off large sections of the two outer layers from the sides of the berry.

A grain of wheat without some evidence of the beard remaining is seldom, if ever, seen even when put through the most elaborate process. But the most highly scoured sample that ever came to the writer's attention was in no danger of having its bran-coat worn too thin.

THE PRACTICAL MILLER

CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

FOR SALE—50-barrel Midget Marvel Mill with elevators, beltings, etc., and complete installation for flour mill plant. Also grain grinder, ton per hour capacity. Good reasons given for wanting to dispose. Will sell cheap. Terms given for satisfactory paper. Reply Box 145, Carleton Place, Ont.

SALESMAN AVAILABLE for the Province of Quebec. Excellent connections in Quebec City and district. Has had several years experience and has represented several leading firms. Can furnish best of references. Reply Box 114, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED — By Head Miller, with 20 years practical experience in modern Canadian mills up to 4,000 barrels capacity. Can guarantee best results as to quality and yield on both hard and soft wheat, and maintain mill at highest point of efficiency. At present in charge of a 1,000 barrel plant. Reply Box 85, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

PRACTICAL MILLER with 23 years experience seeks position with plant having daily capacity of 250 barrels or upwards. Can furnish excellent references. Reply Box 82, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—A 50-barrel Midget Marvel Mill, also complete installation of a flour milling plant. In use about three months. Machinery must be moved from actual premises. Good price for cash. Reply Box 103, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Head miller, with twenty years experience in 150 and 275 barrel mills, and still employed, is desirous of making a change. Applicant is 36 years of age, married, and can furnish excellent references. Reply Box 84, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

MACHINERY FOR SALE—Goldie & McCulloch Oat Roll, 12 x 24. Moore Grinder 15" plate, both in good condition. Apply to R. G. Lindsay, Ayr, Ont.

FOR SALE—Plansifter. Size No. 2, with Stratford drive, four breaks, first middlings and sizings. Address Brampton Milling Company, Brampton, Ont.

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70 Wellington Street - GLASGOW
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THE PRACTICAL MILLER

WATER POWER FOR SALE.—One thousand horsepower on three leading Canadian railways and Great Lakes waterway. Less than 5 per h.p. per year. Elevator close. Town of five thousand population. Situated in Old Ontario. Reply Box 111, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

POSITION WANTED as head miller in a small or medium sized mill. Applicant has had twenty years' experience. Thirty-seven years of age. Reply Box 110, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

ONTARIO MILL has opening for flour salesman. State experience and salary wanted. Reply Box 117, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—Sixty Barrel Stratford flour mill, Allis Rolls, Whitlaw Flour Sifter, Packer, Cockle Machine, etc., all in good running order. Full particulars and price on application to The Pearce Co'y, Ltd., Marmora, Ont.

FOR SALE — Flour mill machinery. Practical enough to fully equip small mill. All modern and in good shape. Attractive price. Reply Box 116-6, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

SALESMAN, with first-class knowledge of flour and feed trade in the Maritime Provinces is available for engagement. Results guaranteed. Excellent references. Reply Box 113, "Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

SALES EXECUTIVE,

Several years experience as principal in Ontario and western grain business, also feed manufacture and distribution; thorough knowledge of French; conversant with grades, options, premiums, hedges, freights and carrying charges. Wants to connect with first-class grain or milling concern. Reply Box No. 115, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Miller, thirty-seven years of age, is open to take charge of small or medium-sized mill, or to take position as second miller in large plant. Has had twenty years experience. Thoroughly familiar with all branches of milling. Can furnish excellent references. Reply Box 107, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

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MONTREAL

THE PRACTICAL MILLER

The Question Box

With a view to making this department one of real service, "Canadian Milling & Grain Journal" cordially invites its readers to send in their problems to The Question Box. There are but very few millers or elevator operators who do not have worries in the proper conduct of their plants. It may be due to lack of experience or inability to trace cause and effect. The logical and sensible thing to do is to ask someone who may possibly know. Often he is not at hand, and still oftener the perplexed miller or elevator operator does not want to show his lack of knowledge. Under these circumstances he can address his inquiry to the craft through this journal. His name will not be divulged if he wishes to remain incognito. Someone is sure to reply who has had similar problems to meet or similar questions to ask. We guarantee to devote all the space necessary to the asking and answering of questions, so do not be backward in sending them in. THE EDITOR.

QUESTION.—To what part of the grain are we indebted for the ash content?—A. C. T.

ANSWER.—The ash content of flour is supposed to represent the fibrous part of the grain and can be from the bran, from the germ or from the fibre within the grain. The ash content, to a certain extent, represents a part of the mineral salts which it is very desirable to retain in the flour, if it can be done without injuring the elasticity of the gluten. Poorly cleaned wheat is responsible very often for a high ash content but a high ash content does not every time mean a poor grade of flour. A low volume and a high ash content is a good indication that the ash contained in the flour is injurious to quality.—B.M.

JUDGING THE COLOR OF FLOUR

The apparent color of a flour in the dust is quite often misleading. The degree of fineness of the sample; the amount of pressure exerted at the sample board; the amount of moisture contained; all these have a bearing upon the appearance of the sample. An examination of a coarse and fine sample of flour through a glass will show the latter as a comparatively unbroken surface, while the surface of the former will be found composed of "hills and hollows"—the hollows showing shadows, and the hills reflecting the light in a varying degree, depending upon the manner in which they are struck by the light rays. A sample containing a high degree of moisture will more readily be conformed into a smooth surface than one that is dry, and it will quite often be found to have its surface in a lower plane. This is because the drier flour will not pack down so readily under the same pressure of the spatula. And if the surface of the two samples are on different planes, a judgment of their relative colors is impossible.

For these reasons, it is seldom that a miller or a cereal chemist will commit himself upon the quality of color of a sample in the dry, or dust. Even after the samples have been wetted, his final judgment is usually reserved until the samples have been dried. Then, after drying, the greatest nicety of judgment is essential in fixing the color value, for there are no arbitrary rules. Machines have been devised for this purpose, but they have generally been discarded as worthless. The practiced eye of the observer furnishes the only practical method of judging flour color.

A characteristic of fresh-milled flour is its creamy, or yellow, color, compared with a standard a few days old. It remains for the observer to determine whether this yellowness is normal. Some millers are able to determine very accurately whether a certain sample is equal in color quality to a certain standard, not because it is of the same actual color, but because it has certain characteristics that indicate what color it will assume with age.

Young Doctor—"By Jove! Mary, this sitting around waiting for a practise is getting on my nerves."

Doctor's Wife—"Couldn't we invite the neighbors to dinner and give them something that would disagree with them?"

"Well! What are you stopping for?" asked the young man, as the taxi came to a halt in the middle of the block.

"I heard the lady say 'Stop'," said the taxi driver.

"Well, she wasn't talking to you."

The new maid was in many respects quite satisfactory, but the mistress had observed that Biddy, in her dusting operations, always missed a beautiful statue of Venus, says the Pittsburgh Chronicle-Telegraph. "Biddy," she said one day, "why don't you dust this figure? She's covered with dust!" "Be jabbers," replied Biddy. "I have been thinking for a long time, ma'am, that she should be covered with something."

Shortly after the reconstruction period began, an old Southern planter met one of his negroes whom he had not seen since the latter's liberation.

"Well, well!" said the planter, "what are you doing now Uncle Josh?"

"I'se a-preaching ob de gospel."

"What! You preaching?"

"Yassah, marster, I'se a-preaching."

"Well, well! Do you use notes?"

"Nossuh. At de fust I used notes, but now I demands the cash."

Yesterday, says a western paper in a recent issue, we were the first newspaper to publish the death of John J. Parker. To-day we are the first to deny the report. The Morning Bugle is always in the lead.

"I often wonder why Jenks is not more popular, for he's the politest man I know."

"That's just the trouble. He's so confoundedly polite he gives the impression that he wants to borrow money."

THE MANUFACTURE OF

Grain Elevator Machinery

requires years of experience. We have made the equipment for over 3000 Elevators, which are scattered all over the three Western Provinces.

Our Elevator Service Department

is up-to-date and at your disposal.

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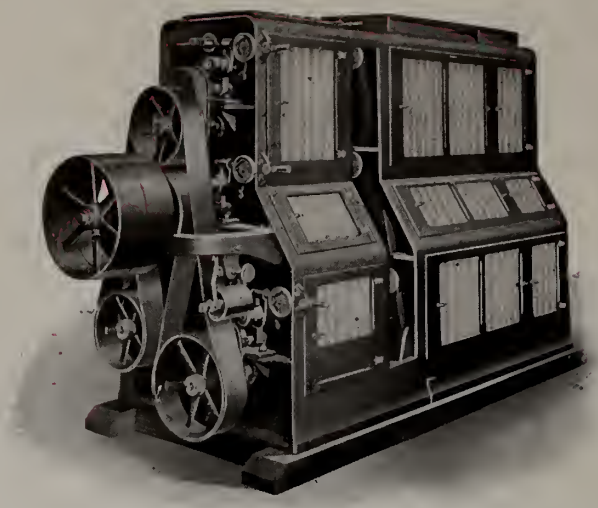
The SUCCESS of the MIDGET MARVEL



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PATENTED VIBRATING SCALPER SCREEN under first break

SMALL AMOUNT OF POWER AND LABOR required to operate

With the use of gears we maintain a constant and positive differential. Experience has taught us that by use of gears ONLY can this positive differential be maintained.

The VIBRATING ADJUSTABLE SCALPER SCREEN under the first break is an essential feature. It is found exclusively in MIDGET MARVEL MILLS. Its use in Canada is absolutely controlled by us through letters patent.

POWERS REQUIRED:—We recommend 10 H.P. for the 25 Barrel, 15 H.P. for the 50 Barrel size, (Many owners are using less. We recommend, however, some reserve power.)

Built entirely within cast iron frames, with planed joints, the MIDGET MARVEL is solid, substantial, rigid, and operates entirely without vibration.

During the past ten years we have constantly improved the MARVEL. A recent improvement is a Disintegrator which is built in and forms a part of the mill. It is applied between the Second Reduction Rolls and Reel. This gives us a 5 per cent. average increase in yield. This feature, also, is exclusively controlled by us through letters patent. An entirely new ventilating system which eliminates excess moisture, heat and dust, is our latest improvement.

The SUCCESS of the MARVEL FLOUR MILL has been proven by ten years of operation and the 2,500 (round numbers) of these mills now running on the North American Continent.

For further information and descriptive literature address:

Pollard Manufacturing Co., Limited

NIAGARA FALLS, ONTARIO

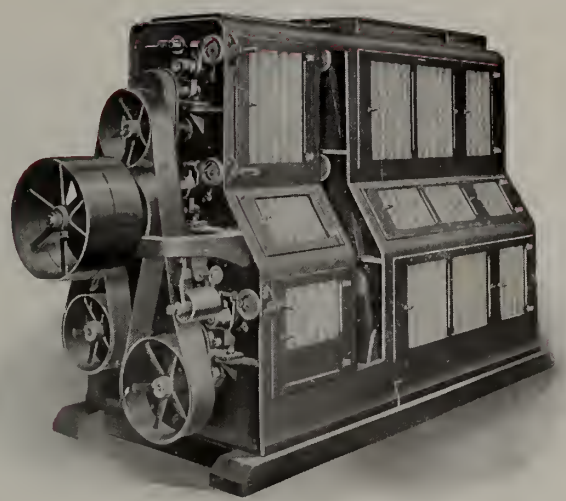
Western Office: 1206 Union Trust Building, Winnipeg, Man.

CANADIAN
Milling & Grain
JOURNAL

VOL. III MONTREAL, AUGUST 1st, 1922 No. 13

THE YELLOW BOOK

The Midget Marvel Flour Mill



The Mill with which to secure results.

Makes a Flour of superior quality. Combines the efficiency of the very largest Mills with the small capacity required for a local business.

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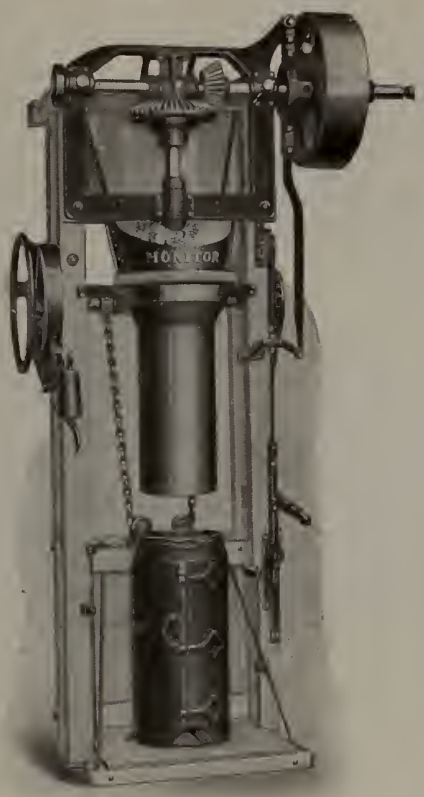

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We believe in our Packers. We believe so thoroughly in them that we guarantee their proper and efficient operation. If there is any risk—we dispute the statement—it is our risk, for if the machine does not perform to specifications, your money will be refunded.

Study carefully the illustration of the **MONITOR Friction Drive Bran or Feed Packer**. Your experience will tell you quickly that here is a machine that is properly equipped. Then if you will talk with a user of it, his experience will tell you that this is a machine that properly and satisfactorily works, standing up under the strain of service.

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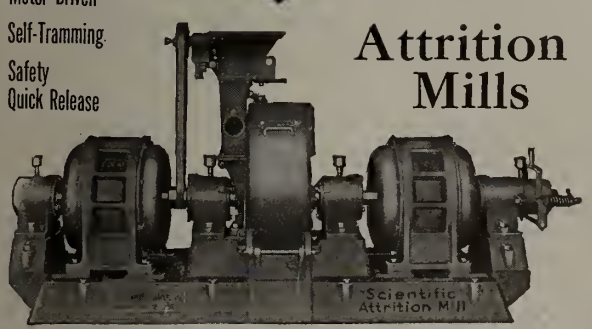
Attrition Mills



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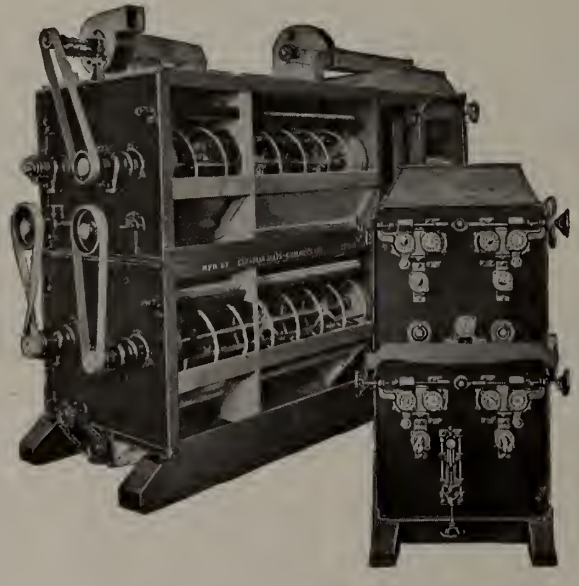

UNIT flour mills equipped with plain bearings consume a surprising amount of power to overcome friction. This energy is not only lost, but is the source of a host of troubles which impair the efficiency of the mill.

The twenty-nine SKF marked self-aligning ball-bearings used in the above unit mill save most of this wasted power. They prevent heating, sticking and binding which often result from the use of plain bearings—at the same time they eliminate the wear which would cause rolls to get out of tram and necessitate readjustment. They also eliminate lateral or advance roll motion by slackness through worn bearings, thus giving an unvariable, rigid position to the roll.

We would be very glad to send you additional information regarding operation of the XXth Century Mill.

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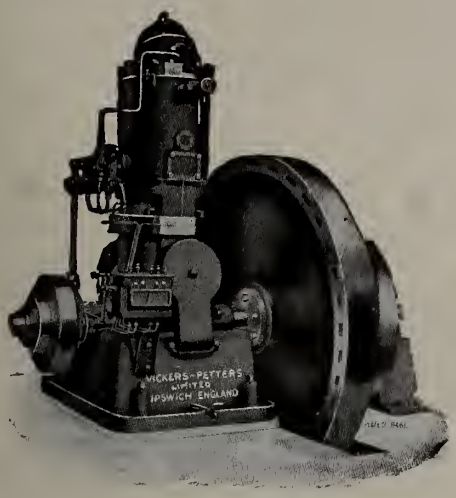

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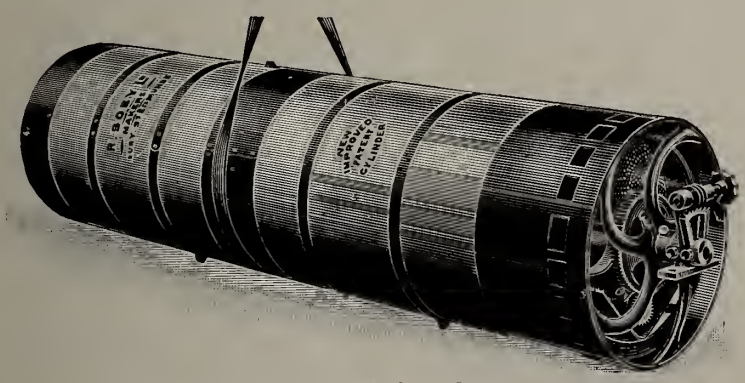

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VOL. III MONTREAL, AUGUST 1ST, 1922. No. 13

CANADA'S ONLY MILLING AND GRAIN PAPER

Falling Export Trade and a Remedy.

CANADA'S total trade for the year just ended amounted to $1,488,003,000, and an analysis of figures exhibits a gratifying balance of trade, imports amounting to $747,763,000 and exports to $740,240,000. In the amount of total trade there has been a shrinkage of $941,285,000 from the previous year, a substantial amount, to the extent of about forty per cent. of the figures of the year 1920-21. Whilst this may largely be set down to the decline in prices, it also has to be accounted for in a diminishing quantity. The year was one of economic disturbance, and the falling off in prices was itself largely due to a lack of demand, whilst the combination had its effect upon both imports and exports.

Though trade figures have sharply declined from those achieved in the two previous fiscal years of inflated prices and exaggerated values, and are lower than those of 1918 when the peak of war effort was attained in the matter of manufacturing, importing raw material and exporting manufactured goods, they are practically on the level with those of the year 1919 and in excess of those of 1915 and 1916. The years immediately past cannot be considered otherwise than abnormal and the statement of the year just gone may be accepted as an indication of a return to more normal conditions and the maintenance of a more or less even ascendency be looked for.

A much-needed impetus, however, can be given to Canada's trade by action on the part of the national government to encourage the shipping of the surplus products of this country to those countries which need them. Our national transportation lines are suffering through lack of business and annual deficits will continue to be recorded in the absence of a real trade revival which the government by trebling or quadrupling the number of its trade representatives in foreign countries can accelerate.

Flour Loading Costs Compared

THAT the use of mechanical appliances cuts the cost of flour loading at seaboard by at least fifty per cent. as compared with the antiquated methods at present generally in use, is indicated in a summarized table of charges which has been compiled by the Millers' National Federation of the United States.

As a result of tests made it was found that the cost per ton of loading and stowing sacked flour, including the winchman's time was $1.2500, while the cost of fuel for two winches, per ton of cargo, including upkeep, wear and tear of cargo falls and cost of slings was $.35, making a total cost per ton of $1.2875.

The cost per ton for loading by mechanical conveyor worked out at $.6333, made up of $.6500 for handling costs and $.0042 for operating cost.

Enlarging on the above figures it is found that a total saving in the loading of 8,000 sacks of flour would amount to $5,066, which should go far towards off-setting the initial cost of the machinery. The loading rate of the mechanical conveyor is easily double that of the steam winch method. In San Francisco where the mechanical loading system is in operation flour has been loaded as cheaply as 65 cents per ton.

The responsible authorities whether they be subject to federal, provincial or private control cannot too soon make a move towards helping the Canadian milling industry meet foreign competition and to develop its export business successfully.

Flour Prices and the Grain Market

MANY flour buyers and not a few salesmen are of the opinion that the only thing which affects flour prices is the fluctuation of the wheat market.

But nay! Not so. The price of offals has a big bearing on flour prices as does also the price of clear flours.

A change in the price of bran, midds, red dog and clears causes a corresponding change in the price of patent flours. When offals and clears decline patents advance, and when offals and clears advance patents decline in price.

It would be well to bear these facts in mind when a buyer can't understand an advance in flour prices.

Bakeries in Small Mills

THERE is no reason why a bakery in connection with a small mill would not be a paying proposition, providing all conditions were favorable.

The first requisite should be a mill that could make a quality flour first, last and all the time, and at a low cost for manufacture.

Then the bakery should be modern and be capable of turning out a loaf of high quality, and able to compete with anything coming into the community.

Again, the bakery should be in a community large enough to consume sufficient bread to keep

it fresh each day, and sufficient to keep the baker fully employed.

If a bakery could take two-thirds of the flour made it would be a fine thing for a small mill running all on cash basis for the bread, and it ought to return good dividends to its owners.

Co-operation Essential to Success

IN a successful mill organization the management has confidence in the wheat buyer, the miller, the laboratory and the salesman, and each of these, in turn, has not only confidence in the other but the ability to co-operate with the other. The miller who will not take his troubles to the laboratory in order that the laboratory may help him solve them is not co-operating with the laboratory and the laboratory which does not ask for the co-operation, advice and assistance of any department of the mill's organization in the development and working out of any ideas or problems which it may have is not carrying on its work as it should and will not get the proper results.

To every cereal chemist in charge of a laboratory who thinks or feels that the laboratory is not given due recognition and importance, we would say—make sure the fault is not yours. Don't try to inject too much theory into the practical end of the business. Show your willingness to help rather than direct the different milling departments, and make everyone feel that you want to work with them to make their department more efficient. Therefore, after all has been said in regard to the laboratory, its value, its functions, etc., the one thought which those engaged in a mill should bear in mind, is Co-operation.

Small Mill Management

Cleaning up, sweeping, scraping grease off the machinery and timbers and floor is a necessary job. It is not a low down, small, degrading job. But at that, how much above street sweeping is the work of cleaning up a dirty flour mill? There is this difference: The man in the mill will not be seen by everybody while engaged in this kind of work as would the street sweeper, but the air he breathes is not as healthful as the street sweeper has. There is no chance for advancement for the street sweeper. There is a chance for advancement for the mill sweeper.

But here is the rub. The employer who will ask his miller to act as sweeper is asking the miller to keep right down at the same job where he began as an apprentice. He is not considering that his miller is a trained artisan. Necessary and honorable as the job of cleaning up the mill may be, it is at the same time the lowest job in the mill, and if the miller's time is not worth any more than that he be required to spend his time at this kind of work he should at once be relieved of the work of operating the mill. The highly responsible position of operative miller and the lowly job of oiler, grease scraper and sweeper should only mix at such time as the miller finds it his duty to take hold and help.

Montreal.—A visit to Georgian Bay ports for the purpose of ascertaining whether or not their grain handling facilities are adequate for the increased flow of traffic expected through Montreal will be made shortly by the local grain elevator commission. The tour will probably be extended to Fort William and Port Arthur.

Other Points of View

THE RAILWAY PROBLEM

London Free Press.—The King Government is taking its time in appointing a new board to manage the Canadian National Railways. From all the denunciations of the old board of directors, which were poured forth during the last elections by Hon. Mackenzie King and his lieutenants, it would have been expected that they would have been dismissed the day after the return of the new Ministry. However, eight months have passed since the elections, and not only is the old C. N. R. board still functioning, but nothing is being done to co-ordinate the management of the two railways.

PRAISE FOR QUEBEC

L'Evenement.—Without vain boasting, Quebec has reason to be proud of the success that has attended its public administration. The finances of the province are more flourishing than those of her eight confederated sisters. It is a guarantee of the wisdom and skill of our public men.

BUILDING FOR THE FUTURE

Financial Times.—There is an oft repeated axiom that Montreal has grown, not because of its administration, but in spite of it. The time has arrived to render the city the service which it deserves and which will develop the great natural advantages which it possesses. The general administration is merely a matter of executive ability, but it requires vision to build for the future and in such a way that its expansion will redound to the credit of a city of its rank.

THE CASE OF THE EX-SERVICE MAN

Ottawa Journal.—The Department of Soldiers' Re-establishment is not like an accident insurance company, whose province it is to look with suspicion on every case submitted to it. It is a board to deal justly and—the people of Canada will assert—to deal generously with men who have been disabled in the course of their duty and in the service of the country. If any disabled soldiers are not so dealt with it is a disgrace to the Dominion.

THE VITAMINE FAD

Modern Miller.—In Europe and America the vitamine is a fad and the chemical flappers are running riot with hocus pocus about the vital influences and effects. It is a mysterious something or nothing with a magic accredited to it, only limited by the imagination of every chemical flapper who wants to associate the "vital processes" with something mysterious.

REPUBLICANS AND TARIFF BILL

Buffalo Commercial.—Open revolt against the pending Tariff Bill has broken out on the Republican side of the Senate Chamber. The feeling is general throughout the country that the McCumber bill is uncalled for. It seeks to prevent the importation of foreign-made goods at a time when, only by importing European goods, can the exporting countries gain their feet again and pay their debts.

EASTERN PROVINCES

MONTREAL

Dubrule Building
Phillips Square

Tel. Plateau 1983

MONTREAL AUGUST 1ST, 1922

THE MONTREAL MARKETS

Flour.—The condition of the market for spring wheat grades of flour shows but little change from last reports. The export trade is reported quiet, but there has been a better demand for supplies for domestic account and a little more business has been done, but on the whole the volume has been small. Car lots of first patents are quoted at $7.80, seconds at $7.30, and strong bakers at $7.10 per barrel, in jute bags, ex-track, less 10c per barrel for spot cash.

There has been no change in prices for winter wheat flour, the tone of the market being about steady at the recent decline, with a moderate amount of business passing in old crop grades, and sales of car lots being made at $5.90 to $6 per barrel, in second-hand jute bags, ex-track, while broken lots are selling at $6:15 to $6:25 per barrel ex-store, and winter wheat patents at $6.30 to $6.40 per barrel ex-store, in new cotton bags. The trade in white corn flour is quiet at $4.50 per barrel in jute bags, delivered to the trade.

Millfeed and Rolled Oats.—The market for millfeed is without any new feature to note. There has been some demand and sales of car lots of Manitoba bran have been made at $25.25, shorts at $27.25, and middlings at $29.25 per ton, including bags, ex-track, less 25c per ton for spot cash. The market for pure barley meal is dull at $37 to $38, and for pure grain moullie at $36 to $37, with feed cornmeal quoted at $34 to $35 per ton, including bags, delivered to the trade. The trade in rolled oats is also quiet and prices are unchanged for standard grades at $3 to $3.30 per bag of 90 lbs.

Baled Hay.—A fair trade continues to be done in baled hay for domestic account and, as supplies on spot are not large, prices are unchanged with sales of car lots of good No. 2 timothy at $25 to $26, No. 3 timothy at $23 to $24, and clover and clover mixed hay at $18 to $20 per ton, ex-track.

Grain.—There has been a fairly good enquiry of late from foreign buyers for all lines of Canadian grain, but as cables were easier and the prices bid lower with our market higher, the volume of business accomplished was small, there being only sales of odd loads of wheat and oats reported for first-half August shipment. Recent reports received from Chicago state that there were 600,000 to 750,000 bushels of wheat worked at New York for export recently, and that sales at the Gulf totalled 1,500,000 bushels, along with 250,000 to 300,000 bushels corn mostly at f.o.b. prices Montreal, and 250,000 bushels rye, practically all for deferred positions.

MECHANICAL FLOUR HANDLING AT SEABOARD

In the above illustration bagged flour is being transferred from railway cars to a mechanical conveyor belt running direct to ship's hold.

GRAIN MEN REGISTER PROTEST

Toronto and Winnipeg dealers are complaining to the Department of Trade and Commerce that Canadian vessel owners on the Upper Lakes are discriminating against Canadian lake ports in the matter of grain rates, and these shippers are demanding of Hon. James A. Robb, the Minister, some speedy remedy. They state that grain is carried by Canadian vessels to Buffalo for 2 cents per bushel, while they are charging 3 cents to Port Colborne and 2½ cents to Georgian Bay ports.

What action the Government will take has not been indicated, but it has been pointed out that if Canadian vessels want to get a share of the American grain carrying trade they should be enabled to cut their rates so as to compete successfully with American shipping owners.

QUOTATIONS ON BRAN AND SHORTS

The following nominal quotations on bran and shorts have been reported by the Canadian National Millers' Association, Coristine Building, Montreal, to the United States Customs Authorities as the prices of these commodities now in effect. These prices are the net cash prices in bulk, f.o.b., the mill:

	Bran.	Shorts.
Montreal	$22.50	$24.50
Toronto	22.50	24.50
Port Colborne	18.00	20.00
Fort William	16.00	18.00
Keewatin	15.50	17.50
Winnipeg	18.00	20.00
Moose Jaw	12.00	14.00
Calgary	11.00	12.00

OCEAN RATES ON FLOUR SHIPMENTS

The following ocean freight rates (nominal) from New York on shipments of wheat flour, oatmeal and rolled oats in sacks per 100 pounds are effective as of the 22nd July, 1922.

	Wheat Flour	Oat-meal	Rolled Oats
	(Canadian funds)		
United Kingdom ports	20c	20c	32c
	(American funds)		
Hamburg	18c	18c	30c
Bremen	19c	19c	30c
Rotterdam	19c	19c	28c
Amsterdam	19c	19c	28c
Antwerp	19c	19c	28c
Havre	23c	23c	37½c
Bordeaux	23c	23c	37½c
Lisbon	32c	32c	..
Copenhagen	25c	25c	45c
Christiania	25c	25c	35c
Gothenburg	25c	25c	45c
Stockholm	27c	27c	45c
Danzig	25c	25c	45c
Helsingfors	28c	28c	45c
Marseilles	35c	35c	65c
Genoa	30c	30c	65c
Naples	30c	30c	65c
Piraeus	25c	..	..
Salonica	25c	..	..
Smyrna	25c	..	..
Constantinople	25c	..	..
Alexandria	25c	..	..

MILLERS WARNED TO OBSERVE LAWS REGARDING MILLFEEDS STANDARDS

The following communication has been addressed by the Canadian National Millers' Association to its members, and is of general interest to millers who have been or are in doubt regarding the observation of the Feedingstuffs Act and the Feedingstuffs Inspection and Sale Act:—

Dear Sir:—Several complaints have been received lately to the effect that certain millers are not adhering to the laws regarding standards for millfeeds and also second hand bags. You are no doubt aware that infractions of either the "Feeding Stuffs Act" or the "Inspection and Sale Act" will leave the offending miller or dealer open to public prosecution. Complaints which we have received deal chiefly with specifications on feed bags and markings on second hand bags.

We are convinced that in the greater majority of cases these infractions are due to millers not being acquainted with the law regarding same. In order that we may have an opportunity of advising millers who are unwittingly infringing on the law, we would request that whenever a case is brought to your attention, you advise this office, giving completely all details in your possession, and we will advise the miller at fault immediately. We will not accept any responsibility for the accuracy of complaints filed and where some may be filed which are not correct, nevertheless for the benefit of the industry as a whole, this will serve as a means to assist millers who are trying to comply with the law.

All complaints will be treated as absolutely confidential, and details will be available to your secretary only. If possible, samples of feeds or bags should be submitted with the complaint.

Yours very truly,
F. C. CORNELL,
Secretary.

THE CHICAGO MARKETS

The following table compiled from figures furnished by Messrs. Logan & Bryan, members of the Winnipeg Grain Exchange and the Chicago Board of Trade, C.P.R. Telegraph Chambers, Montreal, shows highest price levels recorded on Chicago Board of Trade from July 8, 1922 to July 26, 1922, inclusive.

	July 8	July 10	July 11	July 12	July 13	July 14	July 15	July 17	July 18	July 19	July 20	July 21	July 22	July 24	July 25	July 26
July Wheat	1.16¼	1.16½	1.16⅛	1.16⅞	1.16½	1.16¼	1.16½	1.17⅛	1.15⅛	1.13½	1.13	1.14⅝	1.13¼	1.11	1.11	1.12
September Wheat	1.15	1.14⅞	1.14	1.14½	1.14¼	1.15¼	1.15⅛	1.15⅛	1.12¾	1.12	1.12¼	1.12¾	1.12⅛	1.08⅞	1.08½	1.08½
December Wheat	1.16⅞	1.17	1.16¼	1.16¾	1.17⅛	1.17⅛	1.17¼	1.17	1.14⅞	1.14	1.13⅞	1.14½	1.10¼	1.10¼	1.10½	1.09½
July Corn	0.62¼	0.63⅛	0.62⅞	0.62¾	0.62⅞	0.63	0.62⅞	0.63½	0.62¼	0.63	0.63¾	0.63⅝	0.62¾	0.61⅞	0.62	0.62½
September Corn	0.62	0.63¼	0.62⅛	0.64⅝	0.64½	0.65½	0.65¼	0.65⅜	0.64¼	0.64⅜	0.64⅜	0.65⅛	0.64½	0.63¼	0.63	0.63¼
December Corn	0.61¼	0.60⅞	0.61⅛	0.61½	0.62⅛	0.63½	0.63	0.63½	0.61½	0.61⅜	0.61⅞	0.62¼	0.61¼	0.60	0.59¼	0.59¼
July Oats	0.34¼	0.34⅞	0.34¾	0.34⅛	0.34½	0.34⅞	0.34½	0.35	0.34½	0.34¼	0.34⅜	0.34½	0.32⅞	0.31¾	0.31¾	0.32¼
September Oats	0.36⅛	0.36½	0.36⅜	0.36⅛	0.36⅞	0.37⅜	0.37½	0.37¼	0.36⅜	0.36¼	0.36⅛	0.36	0.35	0.33¾	0.33¾	0.34¼
December Oats	0.39⅞	0.40	0.37¼	0.37⅞	0.37⅞	0.40⅜	0.40	0.40⅜	0.39⅜	0.39¼	0.39⅛	0.39¾	0.37	0.36¾	0.36⅝	0.37⅛
July Rye	0.83¼	0.83½	0.83⅞	0.83½	0.85	0.85½	0.85¼	0.84⅝	0.83⅜	0.83⅞	0.84⅛	0.84½	0.83½	0.82⅝	0.81	0.80¼
September Rye	0.82¼	0.82½	0.82	0.81⅞	0.82½	0.83¼	0.83¼	0.82¾	0.81¾	0.81¾	0.81¼	0.82½	0.81¾	0.81¼	0.80½	0.78¾

ONTARIO

TORONTO

Toronto August 1st, 1922

THE TORONTO MARKETS

Flour.—Local exporters of flour are finding it very difficult to make sales. On the basis of cables the price per barrel for straights in bulk would have to be well below $5 in order to induce transactions. There is practically no change in the export market for Manitoba flours and the present weakness in the wheat options will probably make the United Kingdom buyers less inclined than ever to operate. Exporters on this side have been asking from 40 to 42s., but as far as can be learned the only sales that have been made have been around 40s., with an odd lot at 41s. However, with the drop in the options, it is understood that some of the mills have now reduced the asking price from 41s to 39s. 6d. Very little business, however, resulted. There is still every indication of a very fine crop of Manitoba wheat and other grains in the Canadian West. In regard to Ontario Winters sales have been made in the last few days of new crop flour for August seaboard clearance at 36s. These sales, however, are chiefly speculative as, so far, it is not believed, no new crop flour has been purchased by exporters who have made the sales. The demand for old crop winter wheat flour is practically nil now—for domestic consumption—buyers evidently waiting for the new crop. The value of the old crop winter domestic is from $5.40 to $5.50, bags included, although lower prices than these, it is understood, have been accepted. With regard to the British market, a well-known English firm writing to a local exporter states that conditions in the United Kingdom are not such as to encourage high prices for flour. Owing to enforced economy, it says, consumption of bread and other food has been much reduced in the Old Land, and, as wages are being reduced all round, further restrictions will have to be practised, owing to local and national taxation. The letter also states that Manitoba export flours are quite out of line with American hard winter wheat flours, while, broadly speaking, the British importer cannot make a profit out of any imported flour except Australian. Competition by the British millers, moreover, is reported as very keen, thereby reducing the possible profit which the exporter might expect to make.

Oatmeal.—There has been a better enquiry for oatmeal for export of late and sales have recently been made at 41s. c.i.f. United Kingdom points, but at this price there is practically only cost in it for the mills, and business is only being accepted in order to keep the wheels running.

Oil Meal.—The demand for oil meal and cake is very light and few sales are being made of any of the high concentrates. Oil cake is being offered for sale in car lots at $50 per ton, Montreal freights, and 43 per cent. cotton seed is quoted at $60, Toronto freights.

Millfeeds.—Although this is the dull season for millfeeds some business in mixed cars is passing. Stocks are low and dealers are in good shape to take hold of their requirements when the new crops come in. There is a good demand for white middlings and feed flour, undoubtedly due to the big crop. Bran and shorts are also in fair demand. There is a decidedly limited output of feed because of the mills running at present at reduced capacity, which in turn is due to the dullness in the export flour market, and dealers point out that there is really no surplus of millfeeds in spite of the abundant pasturage and the prospects of good roughage crops. There is always a certain demand for bran and shorts, and the present output is hardly sufficient to take care of this. Bran is quoted at $24.00; shorts at $26.00; white middlings at $32.00, and feed flour at $1.80 to $1.90.

Grain.—As low as 95 cents is now being quoted for new Ontario wheat by members of the Toronto grain trade and prices are being influenced considerably by export business in soft flour, the state of which is exceedingly dull at the present time. More new wheat is being offered and most of it is showing up well in the way of quality. No. 1 and No. 2 Northern wheat have advanced a full point during the past few days on the Toronto cash grain market, while No. 3 was up half a cent. Both Western oats and American remain fairly steady. New Ontario oats are being offered at outside points. Various prices are being asked for No. 3 Winter, from $1 up, but $1 to $1.03 is the normal range. The Ontario crop is threshing out in excellent condition. Comparison with last year's crop, it is stated, make the latter look like screenings. It is believed that much of this year's wheat should go 62 pounds to the bushel. The vast bulk of it promises to be of the best grade. Talk of the coal strike interfering with the movement of grain from the head of the lakes is heard, but the shipments recently have been so light that serious results are not anticipated unless an absolute shortage of coal should occur and the demand for wheat should increase suddenly. Generally speaking, the local trade in wheat and oats is rather quiet with dealers reporting sales of small bulk.

PREDICT GOOD MARKET FOR NEW CROP

Ottawa, Ont.—A profitable market for this year's wheat crop is in prospect, according to expert advices received by the Department of Trade and Commerce. European stocks are reported to be low. In a letter to the department one wheat exporting house expresses the opinion that there would be two dollar wheat this year if the ordinary law of supply and demand were not influenced so much by adverse financial conditions. On this account, the prevailing price is problematical, though it is expected to be in advance of last year. Purchases, in Europe, according to advices, are likely to be gradual instead of the crop being marketed in huge consignments.

Ottawa.—As a step in the development of Canada's foreign trade the Department of Trade and Commerce has arranged with the universities of McGill and Toronto to give a special course for export managers. The course will cover such subjects as international trade, foreign tariffs, selling methods abroad, economic geography, trade cycles and currents. Instruction and demonstration will be given in documentation and packing.

UNLIKELY THAT ROYAL GRAIN TRADE PROBE WILL BE RESUMED

Ottawa, Ont.—There has been no demand for a resumption of the sittings of the Royal commission enquiring into the grain trade of Canada since the last commission was halted in its work by a Manitoba court injunction, consequently it is unlikely that a new commission will be formed by the federal government at the present time.

Since the commission sat, however, it is stated at the Department of Trade and Commerce, there has been a reduction in the number of complaints reaching the department as to the handling and grading of grain. The only recent complaint, and one which is now being investigated by officials of the department came from English importers who claimed that they had received shipments of Manitoba wheat which was off grade.

When the matter was followed up here it was found that the grain in question had been shipped from American ports, and under "seaboard inspection" which accordingly gave no guarantee that the wheat would be up to Canadian standard of grading. The investigation is being conducted in an effort to find out if the Canadian wheat was mixed at the American ports with softer American wheat, and also to prevent if possible a recurrence of this practice with its consequent injury to the reputation of Manitoba grain.

FLOUR MILLING IN SCOTLAND

Scottish flour mills have a total capacity of about 44,000 sacks of 280 pounds per week. These mills are situated for the most part in Glasgow, Edinburgh, Leith, Montrose and Dundee. But in spite of this output Scotland imports, normally, about 200,000 tons of foreign flour.

This year the Scottish millers have a decided advantage over the importers as there is a strong European demand for bran which sells at about £11 as against a normal price of £8 per ton. A pound added to the price of bran allows a decrease of one shilling per sack in the price of flour, so they have a margin of three shillings advantage this year.

Hard Wheat Wanted.

Of imported flour the greatest demand is for a straight hard wheat flour, with a small but steady demand for high patent. The lower grades are not in demand. In Glasgow the container preferred is a cotton 140-pound bag for winter wheat flour and a 140-pound jute for spring or Manitoba. Quotations are usually in sterling on a c.i.f. basis; 60 days' sight draft; with a guaranteed clearance from the seaboard; flour to be insured under the all-risk clause for 5 per cent. to 10 per cent. over the amount of the invoice. Goods are usually bought for prompt shipment, that is within 14 days from the mill. The port facilities at Glasgow are excellent, and the charges reasonable.

In general any kind of seed that contains a high percentage of moisture when harvested will mold and deteriorate in germination if allowed to remain undisturbed in a deep pile without free access of air.

The Modern Sophocles

ENVY is a poor occupation of the mind. So is fretfulness over other people's material prosperity. It used to peeve me more or less, as I tramped along life's highway, to have to breathe the six-cylinder exhaust of the rough-neck rich. It troubles me no more. The man afoot gets more first-hand enjoyment out of this good generous earth than does the one who whirls by it in a cloud of dust and smoke, hitting only the tops of the high spots. We make a poor bargain when we trade the odors of roses in quiet places for the smell of half-burned gasoline on noisy highways. Lacking envy, the seeds of war quickly perish, and peace establishes itself.

OUT FISHIN'

Hi Somers was the durndest cuss
For ketchin' fish—he sure was great!
He never used to make no fuss
About the kind of pole or bait,
Er weather, neither; he'd just say,
"I got to ketch a mess to-day."
An' towards the creek you'd see him slide,
A-whistlin' soft an' walkin' wide.
I says one day to Hi, says I,
"How do you always ketch 'em, Hi?"
He give his bait another swish in
An' chucklin,' says, "I just keep fishin'."

He took to sellin' flour one day,
First patents was the line he tackled.
He worked and plugged and fought his way
Until he had some orders shackled.
He buzzed the country side for biz,
His service sure was most allurin'.
'Course he saw to it he got his;
At his store stuff was always stirrin'.
One day when someone asked if he'd
Explain how he got in condition,
He laughed an' said in his slow way,
"Why, boy, I jest keep fishin'."

Well Somer's business' boomin' now.
Hard times? Why, man, there ain't none.
He's got it figured out as how
This year will be a big one.
His plan is—work like all get out—
Don't take it out with wishin';
Keep goin' mornin', noon and night,
Bait up an' keep on fishin'.

OBITUARY

Toronto.—The death took place recently, at his residence, 381 Pacific Avenue, Toronto, of Mr. Arthur B. Collins, aged 62, and well-known in Ontario milling and grain circles. The late Mr. Collins had been for some time past city sales manager for the Campbell Flour Mills, Limited, with which firm he became associated about eleven years ago. He was born in Pickering County and had occupied various positions with the Campbell Flour Mills.

WESTERN PROVINCES

WINNIPEG

WINNIPEG AUGUST 1ST. 1922

THE WINNIPEG MARKETS

Flour.—There has been but little change of late in the flour situation in Western Canada. Millers report business dull and featureless, domestic trade fair, hand to mouth variety, with practically nothing doing in exporting. Output is largely curtailed and a large number of the smaller mills are closed awaiting the movement of the new crop and a broader demand. The larger mills are operating about 50 per cent. capacity. It is understood that these mills are making some shipments east to Montreal, which is being shipped overseas unsold to await for better prices. At present bids received from Great Britain and other European countries are out of line with values on this side.

Since last report prices have been advanced 50 cents per bbl., owing to the strong wheat market, and stiff premiums. Present flour prices are: Top patent spring wheat flour, $7.80 bbl., seconds $7.20, first clears $6.60, jute, mixed cars, delivered at any point between Fort William and the western boundary of Manitoba. In 98-lb. cotton bags, prices are 20c over the jute basis. Saskatchewan points take 10c under these prices, and from Eastern Alberta to the Pacific Coast values rise progressively to $8.10 for top patents at Vancouver and like points. Vancouver Island takes $8.15 for top patents, and Prince Rupert $8.30. For 30-day terms, 10c per bbl. must be added to above prices, and for 60 days, 20c.

Millfeed.—The demand continues excellent for both bran and shorts. Western municipalities are still using bran in considerable quantity fighting the grasshoppers, which are very numerous in certain districts. Prices remain firm, being unchanged from last report. Bran in straight or mixed cars is selling at $20 per ton, and shorts at $22, in bags, delivered Winnipeg territory.

Oatmeal.—The demand for oatmeal and rolled oats continues dull, and a very ordinary business is reported. Prices remain unchanged. Best brands of rolled oats are selling at $2.70 to $2.80, in 80-lb. cotton bags, and oatmeal at $3.35 in 98-lb. cotton bags, delivered Winnipeg territory.

Rye Products.—This market is dull, both domestic and export business being very light. Quotations are: Best patent flour, $7 bbl., in 98-lb. bags; medium, $6; dark, $5; rye meal, $5; delivered Winnipeg territory.

THE GRAIN MARKETS

The demand for Nos. 1 and 2 Northern wheat continued satisfactory through July, and the cash premium on these grades gradually increased, at present time being 9c over July price for 1 Northern and 5c over for 2 Northern. Exporters have been the principal buyers and undoubtedly very considerable amounts have been taken by Great Britain. The offerings have not been large, and fair amounts only were brought out each day at the highest premium mark. No. 3 Northern and lower grades have been somewhat draggy, large quantities of the 3 Northern being delivered on the July contract, and mixing houses have been taking a little of the lower grades.

The future markets have been more or less dull and featureless, and while the undertone remains very firm and values have advanced about 3c since last report there is not a large volume of trade passing. The sympathy of the trade appears to be largely bearish, but short sales are not being pressed, as there is a disposition to wait for further crop development. The market is extremely nervous, and would be easily affected by confirmed reports of damage from rust, drought or other causes. At present the foreigner does not appear interested in the deferred positions, and is undoubtedly prepared to wait for the movement of the new crop before placing orders, believing that prices will work lower.

Foreign exchange shows some improvement, especially British, French and Italian. There is better news from abroad concerning reparations and international debts situation. These all have a close relation to wheat prices on this side. The news in the aggregate apparently favors the constructive side of the market, especially for distant futures, but outside interest is not broad and technical conditions apparently leave the market very susceptible to temporarily depressing influences.

Oats.—This market has been very dull for the last two weeks, and demand apparently has disappeared from both domestic and export interests. It is reported that American oats are relatively cheaper than Canadian, and foreigners are favoring that market. Prices have been very steady.

Barley.—Quiet, with a little business being worked daily for Eastern Canadian account. Prices very steady. Stocks are not burdensome and are in good hands, there being no pressure on the market.

Rye.—Extremely quiet but firm. Buyers are holding off the market and are waiting to see if the farmers will sell their new crop early. Rye cutting is now general throughout the West.

Flax.—There has been a very tight situation existing in the July future. Stocks are small and are in a few hands. Prices have held steady and strong. Crushers have been buying but only for immediate needs.

WHERE THE DURUMS CAME FROM

The percentage of Durum in the northwestern spring wheat crops has shown a tendency to increase rapidly the past six or seven years. In North Dakota, in 1914, about 13 per cent. of the crop was Durum; in 1920 it was 36 per cent. and the past year it was over 40 per cent. It may be interesting to note where the principal varieties came from and who introduced them.

Kubanka, named from Kuban, Russia, came from the Uralsk territory in Southern Russia and was introduced in this country in 1900 along with other so-called "macaroni" wheats. Prof. Hansen, of South Dakota, had made an earlier introduction in 1898, but the 1900 introduction was the principal one and was made by M. A. Carleton, then Cerealist of the U. S. Department of Agriculture.

Pererodka and Gharnovka are quite similar to Kubanka, and were imported from Russia in the macaroni wheat campaign.

Beloturka came to this country from the Paris Exposition in 1900, and is probably of Russian origin.

Arnautka was first introduced in this country by the U. S. Department of Agriculture in 1864. The original wheat is thought to have run out or been discontinued. The "goose" wheats of the 'Eighties and 'Nineties, which occasionally were met with, were perhaps descendants of this original importation. The Arnautka of today was brought over by Russian immigrants. It is the commonest Durum grown in North Dakota.

Monad was introduced in this country by Prof. H. L. Bolley in 1903. This is the least susceptible to rust of any of the amber Durums.

Acme is a home product, a pure line selection, made in 1909 by Manley Champlin at Highmore, S. D., from a field of Kubanka wheat.

Mindum is a selection made by the Minnesota Experiment Station. It is quite similar in its characteristics to Arnautka.

Kahla originally came from Algeria. It is known under other names, such as Black Chaff, Black Durum, Purple Durum and Algerian Durum. The name "Kahla" means black.

Peliss is named after Pelissier and the wheat is often so called. This wheat is from Algeria and is grown in that country and generally throughout Northern Africa.

Golden Ball was introduced in 1918 from South Africa by investigators of the U. S. Department of Agriculture.

Durum No. 5 (D-5) was obtained in Russia in 1903 by Prof. H. L. Bolley. This is a red Durum, strongly resistant to stem rust, but not otherwise desirable.

LOOKS TO WESTERN CANADA FOR FLAX

Winnipeg.—The Province of Ulster, Ireland, is looking to Western Canada as a future field for the culture of flax and the possible development of the linen industry according to a representative of the Ulster Government touring Canada on its behalf. Western Canada has this year seeded a record acreage to flax.

TRADE OPPORTUNITIES

With a view to assisting the Canadian milling trade in the development of a permanent and profitable export business, "Canadian Milling & Grain Journal" publishes in each issue a selected list of trade opportunities, the investigation of which should prove of value. "Canadian Milling & Grain Journal" is taking special pains to ascertain the reliability of each opportunity presented and will gladly furnish any further information regarding them that may be desired.
THE EDITOR.

No. 273.—Messrs. Boyes & Anger, flour importers, 11 Corn Exchange Chambers, London, E. C. 3, are open to negotiate with Canadian flour millers for the handling of their product in Great Britain.

CANADIAN INVENTS NEW METHOD OF CLEANING AND GRADING SEEDS

A new method of cleaning and grading seeds and grain has been invented and patented by Mr. E. E. Eddy, formerly the Chief Seed Inspector of the Canadian Department of Agriculture. The separation is made entirely on the basis of comparative specific gravity. This is effected by subjecting the stock to centrifugal action in the presence of a liquid which is of the specific gravity required for the separations desired. A suitable material for making a liquid of the desired density is sodium nitrate, but other substances may be used. With seeds weighing about 60 lbs. per measured bushel, a solution of about 1.2 specific gravity is required. By regulating the density of the liquid, the proportion of seeds which pass into the heavy and light separations is under complete control. Tests of several samples of red clover showed a perfect separation of several kinds of the most common wheat seeds, classed as noxious under the Seed Control Act. It is expected that valuable results will be secured also with grain by removing barley and oats from wheat, oats from barley, etc., in addition to the separation of weed seeds. The process is now being developed with the idea of putting it on a commercial basis, and should this be accomplished, there should be a great improvement in the purity and general quality of the seed and grain available.

"How do you know that Perkins didn't go to college?"

"Why, he said he knew Babe Ruth when she was a chorus girl."

THE WESTERN MARKETS

The following report furnished by Messrs. Baird and Botterell, 103 Grain Exchange, Winnipeg, shows daily highest price levels from July 8, 1922, to July 26, 1922, inclusive.

	July 8	July 10	July 11	July 12	July 13	July 14	July 15	July 17	July 18	July 19	July 20	July 21	July 22	July 24	July 25	July 26
July Wheat	1.31¼	1.30⅞	1.30¼	1.21⅛	1.30⅞	1.29⅛	1.30¼	1.31¾	1 29⅞	1.29	1 28½	1.30	1.28½	1.27	1.30⅛	1.32⅞
October Wheat	1.21⅛	1.20⅛	1.19¾	1.19½	1.20	1.19⅝	1.19½	1.19¾	1.17⅝	1.17	1.17	1.18	1.16⅜	1.14⅝	1.14⅜	1.14⅜
December Wheat	1.15¼	1.15⅛	1.16	1.15⅞	1.15¼	1.15⅝	1.16⅛	1.15½	1.13¾	1.13⅛	1.13	1.13¾	1.11¼	1.10½	1.09⅞	1.10⅜
July Flax	2.41	2.42¼	2.41⅛	2.42	2.42½	2.44	2.43	2.41½	2.39	2.39	2.45	2.45½	2.41	2.39½	2.40	2.41
October Flax	2.24½	2.24⅛	2.23	2.21¼	2.20½	2.20	2.19	2.16	2.11½	2.10¾	2.09½	2.11¾	2.08¼	2.07¼	2.07	2.08½
December Flax	2.15⅛	2.14¾	2.15	2.14⅞	2.15	2.16	2.15	2.12	2.07¼	2.06	2.05⅝	2.06⅝	2.04	2.03½	2.03⅝	2.04
July Rye	0.84¼	0.84⅜	0.84¼	0.84⅞	0.84⅛	0.84¾	0.83⅛	0.83¼	0.82⅜	0.82¼	0.83	0.83⅝	0.84	0.82⅛	0.81	0.80¾
October Rye	0.79¼	0.80⅛	0.80½	0.80⅞	0.80½	0.81	0.80½	0.80½	0.79½	0.79¾	0.80	0.80½	0.80¼	0.79⅜	0.78	0.77
December Rye	0.74	0.74	0.74	0.74	0.74	0.74	0.73½							0.74	0.74	
July Barley	0.64½	0.63⅞	0.63¼	0.63	0.62⅞	0.63	0.63½	0.65	0.65	0.64⅜	0.64⅞	0.65	0.64¼	0.64½	0.63⅞	0.63¼
October Barley	0.60⅞	0.60¼	0.61	0.60⅞	0.60½	0.61	0.60½	0.61	0.60½	0.60⅛	0.60⅛	0.60⅛	0.59½	0.59⅜	0.58½	0.58⅞
December Barley													0.55⅞	0.56	0.55¾	0.55⅝
July Oats	0.51	0.50½	0.51	0.50¼	0.50⅞	0.51	0.50½	0.51½	0.50⅞	0.50⅝	0.50⅜	0.50¾		0.50⅝	0.50	0.50
October Oats	0.47½	0.47⅞	0.46¼	0.45⅜	0.46	0.46⅛	0.46½	0.47½	0.46⅜	0.46¼	0.46¼	0.46⅜		0.45⅜	0.45	0.45¼
December Oats	0.45½	0.44⅞	0.44½	0.45	0.44¾	0.44⅛	0.44½	0.45	0.44⅜	0.44¼	0.44¼	0.44⅜		0.42½	0.42⅛	0.42¾

Foreign Flour and Grain News

ALTHOUGH it had been anticipated that pending a re-adjustment of prices consequent upon the new crop the flour trade would show but little change from that recorded during the past few weeks, a distinct improvement in the volume of trade passing has been noted of late. Foreign buyers possibly misinterpreting the effects of the so-called wheat control which Western legislatures are feverishly endeavoring to implement into operation for this year's crop have made some substantial purchases for August shipment while domestic buyers after a long period of buying from hand to mouth appear from reports to hand to be buying a little more frequently. Western mills are as a general rule still working far below capacity but the approach of the crop season is viewed optimistically and many millers are putting their plants in shape for what they hope will prove to be a good year.

Prices show no change from last report. First patents are quoted at $7.00 per barrel, second patents at $7.30 and strong bakers at $7.10 per barrel in jute bags ex-track, less the usual discount for spot cash. Winter wheat choice grades are offering at $5.90 to $6.00 per barrel, with smaller quantities selling at from $6.15 to $6.25. Winter wheat patents are selling at $6.30 to $6.40 per barrel in new cotton bags. White corn flour is steady at $4.50 per barrel in jute bags.

The export trade in grain has been exceedingly quiet of late owing to weakness of cables. Recent bids received for Manitoba wheat showed a decline of 3d per quarter, and for oats 4½ to 6d per quarter. As these advances precluded the possibility of any profit-making at prevailing market prices no business was recorded. Prices in the market for cash oats have been steady the demand for supplies from domestic and country buyers having been very limited.

Considering the season there is reported to be an unusually brisk demand for millfeed, bran offering at $25.25, shorts at $27.25 and middlings at $29.25 per ton, including bags, less 25c per ton for spot cash.

ROUMANIA.—Warm, sunny weather, accompanied by an occasional shower, has lately been experienced, and there is confidence in the excellent condition and promise of the growing crops. Harvesting of winter wheat and rye is now near commencement, and cutting of barley should now be in progress. Maize is backward, owing to seeding delay.

JUGO-SLAVIA.—Pleasant, showery weather has prevailed of late. Harvesting of wheat, rye, and barley, is now general, while the growing maize crop is reported to be in excellent condition.

ARGENTINA.—Further heavy rains have been experienced, which can only be regarded as unfavorable, both for the conditioning of maize and the welfare of the young wheat and oats plants.

AUSTRALIA.—The latest weather report states that light to moderate rains have fallen in Victoria, whilst there have been scattered light to moderate rains in New South Wales, with the exception of the west.

FRANCE.—The weather has continued rainy, and growers are complaining that the ripening of the grain is being delayed. Harvesting, nevertheless, is proceeding actively in the south, and a few fields of barley have been cut in the central departments. It is apparent that wheat yields will vary considerably in different parts of the country, and on this account it is more difficult to form any quantitative estimate. In the main, however, reports on the condition of the wheat crop are not pessimistic. Rye is an exceptionally fine plant, while oats show much improvement.

ITALY.—Abundant rainfalls have been experienced in Northern Italy, which have been of much benefit to maize. News from the South and Sicily, although conflicting, is mainly pessimistic, and all hopes of a large wheat crop have now been abandoned. Estimates of the probable outturn of wheat vary between 16 and 19 million quarters, and although the former figure may be considered unduly low, there is little disposition to hope for an outturn above the latter. Taking an average of the past five years, the quantity of wheat consumed in Italy every year is approximately 30½ million quarters, so it is apparent that Italy is likely to import a very large quantity of the premier bread-grain during 1922/23.

SPAIN.—Cooler weather has recently been experienced. Regarding the wheat outturn, a recent reporter expresses the opinion that a good average crop will be obtained. Translated into figures, this would indicate some 17,000,000 quarters, and an import requirement of one to one and a half million quarters.

HUNGARY.—According to an official forecast, the wheat and rye harvest in Hungary this year is expected to fall nearly 20 per cent. below that of 1921. Latest mail advices state that the recent good rains have had a beneficial effect on all cereal crops, especially maize. Potatoes and pasture have also benefited.

CZECHO-SLOVAKIA.—The desired rains have at last fallen, and the crop situation has improved. More rain, however, is wanted in Slovakia, especially for the spring crops.

SPANISH FLOUR AND WHEAT CONTROL

Madrid.—A law has been passed by the Spanish Government to prohibit the importation into Spain of wheat and wheat flour until such a time as the price of wheat in the markets of Castile shall be lower than 53 pesetas per 100 kilogs. for a period of a month.

The law also authorizes the Spanish Govt., whilst the above prohibition remains in force, to permit the importation of certain quantities of maize into Spain at a reduced duty not to exceed 50 cts. per 100 kilogs., under certain conditions. A new Royal Order lays down the conditions for the importation of maize at the reduced rate of duty. The Order provides, that, maize destined for human consumption or for fodder may be imported at the rate of 50 cts. per 100 kilogs., up to a quantity of 200,000 metric tons, of which 120,000 metric tons must be imported through the ports of Galicia and Cantabrico. The reduced duty is to be applied to consignments in transit or in warehouse and declared for consumption on 11th June last.

The Annual Clean-Up in the Mill

When it is house-cleaning time in the mill the very best thing that can be done at the least cost, except, perhaps, for labor, is to get down to a real wilful, determined effort to clean house. You must begin up in the peak of the roof and work on down, allowing not a single place to go uncleaned, or to wait for some other time. If there is a pile of rubbish or junk, some old machines and traps which you are unable to decide on as to their future value, it is poor policy to allow them room in the mill. Traps and old relics may become handy in furnishing of repair parts at some future time; this is true, but at that, they have no place in the mill. It is too much of a job to clean them every cleaning time and it is unsightly to have them in the mill uncleaned. If you must store this old stuff then store it some place where it will not be an eyesore and a hindrance to the clean and tidy appearance of your plant. You should clean off and scrape all oil and grease from posts and floors, put up pans or cans to catch oil drips so that in the future the trouble from this source may be avoided.

Clean Off All Shafting.

If the shafting is rusty and covered with dirt, or is crusty, you will be well repaid if you will clean it off. A piece of sand paper fastened to a board held against the shafting when in motion will dress a lot of junk off the shafting in a hurry. When working about shafting be very careful that you do not get tangled up with the machinery; have no open sleeve, buttons lacking on your clothes or anything that will wrap on a shaft. To hold a cloth to a revolving shaft is dangerous. You can get considerable help on the shafting polishing job if you will place an open ring cut from heavy belting on the shafting. As the shafting revolves this ring will travel on the shafting and wear it bright. A clean well-kept mill is a desirable place to work, while a dirty mill is a very uncomfortable place always. Millers should have pride enough to want to clean up and then make an effort to keep clean.

When it comes to repair work it is necessary that considerable judgment be exercised. To discard machinery which is still capable of good service, provided it is properly repaired, is wasteful, expensive and perhaps more than the mill can afford. To run worn-out machinery which can no longer be repaired, which never was very good at best and which now fails to perform creditably is out of the question. Beginning with the cleaning machinery, it is necessary to have all screens in good condition, perforations of proper size and the sieves tight so they will not rattle and cause the grain to play leap frog and jump over the tail of sieves and waste in the trash. Eccentrics must run snug so they will not rattle and pound. The bearing may need draw filing, if brass, and rebabbitting, if Babbitt metal. Millers must not be satisfied with rattling, pounding and heating machinery bearings. If it is necessary to rebabbitt a bearing the first thing to do is to see to it that the journal is smooth and true, so that the metal will last. A rough journal will soon cut out the new metal. It is not so very far to the shop where you can have a journal turned down and made true and smooth. True, it will be smaller at this point, but this will not matter. Clean out all the old metal and grease and be sure that all pit bores are open, place the journal exactly where it should run, dose up the ends with leather washers which will hold the metal and make a smooth job of it. Use good metal and pour it if necessary from both sides at the same time with two spoons. Provide oil grooves by wrapping cord of suitable size or a very narrow strip of lace leather on the journal before babbitting. With a little practice and common sense applied mill operatives can soon learn how to make a rattle run quiet, save power, annoyance, oil and cussing.

At times it is possible to move a bearing so as to miss a rough place on a shafting, especially in case of a line shaft. It is never good policy, however, to rebabbitt a box and then have a rough journal running in the box. Rough journals create a lot of friction, cause heating and consume power, wear out quickly and show that the operator is a poor mechanic, shiftless or perhaps has not got time to do the necessary repair work, or he may not have the ability to keep the machinery in repair.

When it comes to repairing belting, it is possible to make a big saving if practical millers go about it in a practical manner. First thing to do is to consider if the belt is worth while. Will it pay to repair the belt; will it hold when put to work, or will it give way at a time when needed? If it is decided to repair it then all rivets at or near the joints should be removed, and the joints dressed to a feather edge and then a light coat of liquid glue applied. Laced or riveted or metal hooks in joints should not be tolerated in leather belting.

THE ABSORPTIVE CAPACITY OF FLOUR

A question which claims the universal attention of millers is the absorptive capacity of flour as compared with the quality of the flour. Recent chemical tests showed that the flour at the tail of the mill absorbs more water than that from the first few reductions, due to a greater ash content. Another point which has to be borne in mind is the breaking down of the starch cells. In this direction, there is a decided limit. When the starch cells are broken down, the absorption is increased, but pressure has to be regulated so that the quality of the flour is not impaired. A well-known American chemist, in dealing with this matter when answering one of the many interesting questions asked for the benefit of the members of the Association of Operative Millers, mentioned some experiments he had conducted. In these, the utmost was done to break the starch cells and increase absorption. As a result, 80 per cent. of absorption was obtained. The flour was obtained by regrinding ordinary flour, using porcelain rolls set with no differential, and exerting all the pressure possible. The interesting information is that after an absorption of 65 per cent. was obtained, the flour fell off rapidly in baking quality; either the excess moisture was retained, causing a heavy, soggy loaf, or the excess moisture was baked out, causing a loaf of low volume.

The Elevator Operator

AUSTRALIAN SEED WHEATS

The adoption of foreign varieties of grain, and the results therefrom, form interesting subjects to all who have connection with the business of flour manufacture. In past years much experimental work has been done in this direction by the United States Department of Agriculture, which has recently issued a bulletin on the use of Australian wheats for seed purposes in the Pacific Coast area, where both soil and climate are suitable for this class of wheat. Several varieties of Australian wheat have, in fact, become important commercially in the Pacific Coast area, and many others are now under experiment to determine their merits or demerits. Experiments and time have proved that the Federation group, which consists of three varieties, namely, Federation, Hard Federation, and White Federation, appears to be best adapted for conditions in this white wheat region. Generally speaking, Australian varieties in the United States are grown only on the Pacific Coast and inter-mountain areas. The mild climatic conditions under which wheat is grown in Australia are very similar to those of California; therefore, Australian varieties are sown at the time of the year (September and October) which corresponds to the Australian spring. In many parts of Oregon and Washington, however, they can be grown only as spring wheats.

HANDLING THE 1922 CROP

Transportation of the grain from the prairie farms to the thousands of line elevators scattered throughout the West constitutes the crop's first step towards the grain markets of Canada and those of the world.

C. P. R. DROPPING ELEVATOR BUSINESS

New Westminster.—"The Canadian Pacific Railway is going out of the grain elevator business," said Mr. Grant Hall, vice-president of the Canadian Pacific Railway, when here on a visit of inspection, recently.

"The C. P. R. is not keen about elevator business. We got into it and now we are trying to get out of it. We have decided that it is not our business."

Mr. Hall said the railway still owned one elevator, situated in Fort William, but expected that in due course of time it would relinquish control of that. He pointed out that the railway's business was to move grain and assist privately owned elevators to handle the crop.

Fort William.—It has been learned from Canadian Pacific officials here that, while negotiations are under way regarding the lease of their only remaining elevator, elevator "D," to private grain interests, nothing has yet been done. It is, however, highly probable that the elevator will be operated this fall by interests other than the railway company.

PLAN DUPLICATION OF IRELAND'S FLAX INDUSTRY IN DOMINION

Three business men, whose mission may mean much to the development of a new agricultural interest have arrived in Canada. They plan an investigation that may duplicate Ireland's flax industry in the Dominion.

Mr. Joseph Marshall of the Tullygush Mills at Armagh, whose interests as a manufacturer have hitherto included flax growing on a large scale, declared on his arrival here that the unrest, political and religious, in Ireland has practically brought the whole industry to a standstill. Mills are idle because of a lack of raw material, according to his statement.

Because of this condition Mr. Marshall, accompanied by Messrs. D. McClelland and R. R. Louden, both of Armagh, will take up the matter of flax growing and the handling of raw flax in all of the eastern provinces. They plan an exhaustive survey of the labor conditions and the suitability of the crop to the soils of different sections.

If it is found that Canadian farmers are willing to take up the cultivation of the crop it is possible that large numbers of experts, not only in the growing of flax, but in its handling and preparation for the mills also, will be brought here from Ireland and distributed in the various centres where flax-farming is established.

Elevator, Mill & Personal Notes

Saskatoon.—The McMillan Grain Company have opened new offices in the C.P.R. building connected by direct wire to the Winnipeg Grain Exchange. This will enable their customers to have buying and selling orders executed without delay in Winnipeg, and to select the best time for selling their crops.

During the past crop season the firm has handled large quantities of grain through the government elevator here, and was the first firm to make shipments of wheat in sacks through Vancouver to Japan.

Niagara Falls, Ontario.—The Canadian Shredded Wheat Company is enlarging its plant here, by the erection of wheat storage bins and cleaning room. These are being built of concrete and when completed will give storage capacity for 250,000 bushels and a cleaning capacity of 250 bushels an hour. The building will all be fireproof and will be completed about October 1st, at an estimated cost of $152,000 for buildings and equipment.

Vanscoy, Sask.—The Quaker Oats Company's new elevator here is practically completed. It has a capacity for 65,000 bushels and is of fully modern construction throughout.

Reconstruction of the company's 50,000 bushel elevator at Laura will soon be underway and upon completion will be up-to-date in every respect.

Toronto.—Toronto milling and grain and journalistic circles were interested recently in the announcement that the resignation of Norman P. Lambert from the post of secretary of the Canadian Council of Agriculture would be presented to the Council in Winnipeg shortly. It is stated that Mr. Lambert is to take an executive position with the Maple Leaf Milling Company, Ltd. He is a former Toronto newspaperman and has taken an active part in the work of the Council of Agriculture. He arrived in Toronto recently from the West and is now at the head office of the company.

Toronto.—A meeting was held in Toronto recently of the creditors of Mr. G. B. Curran, grain broker, who assigned to Humphrey Colquhoun, authorized trustee, with assets of $928 and liabilities of $3,312.61. It was decided to dispose of the assets and to make an effort to locate J. K. Curran, a former partner.

Toronto.—For the purpose of buying and selling grain and to engage in a general milling business, Hugh Parslow & Company, Limited, has been organized in Toronto. The head office of the company will be in Fort William and the capital stock is $50,000. Among the incorporators are Hugh Parslow, merchant, and H. F. Heald, traveller, of Fort William.

Omemee, Ont.—A spark from a passing engine is believed to have started the fire that recently burned to the ground the elevator and storehouse of the John Douglas Elevator Company. Its contents of 1,000 bushels of grain were consumed.

Mr. D. I. Barr recently succeeded Mr. W. C. Duncan as manager of the Victory Flour Mills, Ltd., of Vancouver, B.C.

Mr. Jos. Rathbone, of the statistical department of the grain commission offices in Fort William, Ont., and also secretary of the Fort William motor club, has left with his family on an extended motor trip through the United States, going by way of the international highway, to Duluth, thence to Minneapolis and St. Paul, and he will visit Chicago and other of the larger cities in the nearby states before returning home.

Mr. F. B. Ham, of Messrs. C. R. Vannatter & Co., grain dealers, Dominion Bank Building, Toronto, has returned after a pleasant holiday outing on Lake Skugog, where he landed some prize 'lunge and bass.

Mr. S. R. Stewart, of New Hamburg, Ont., formerly of Messrs. Stewart Brothers mill, was a visitor in Toronto recently.

Mr. W. C. Omand, Royal Bank Building, Toronto, is spending his summer week-ends at his summer cottage on Lake Simcoe.

NEW GRAIN COMMISSIONER NAMED

Ottawa, Ont.—Mr. James Robinson, vice-president of the Saskatchewan Co-operative Association, Regina, has accepted the position of Grain Commissioner, in the place of Mr. J. P. Jones, who has resigned. It is understood that the Minister of Trade and Commerce, Hon. James A. Robb, who made the recommendation to the Government, has had in mind, for some time, the appointment of a direct representative of the Grain Growers on the Board of Grain Commissioners for Canada. The Board is now composed of Messrs. Leslie Boyd, K.C., chairman, formerly of Montreal; Matthew Snow and James Robinson.

SERIOUS FIRE IN MAPLE LEAF MILL

Welland, Ont.—Fire caused serious loss to the Maple Leaf Milling Company's mill here recently and in spite of quick work on the part of local fire companies, aided by trucks from Crowland, had spread throughout the whole mill before water could be applied. The loss will be heavy.

Mr. Robert Cooper, M.L.A., manager of the mill and a director of the company, was out on his farm at the time. He could not get into the building and an hour and a half afterwards could not begin to estimate the loss.

The origin is understood to be due to spontaneous combustion in the purifier rooms. Some fear of explosions was felt but beyond a sharp noise and a sudden burst of flame in the top floor, the fire was not spectacular.

Lafleche, Sask.—Mr. F. J. Alderson was a recent purchaser of a XXth Century Mill of 50 barrels capacity from the Canadian Allis-Chalmers, Limited, Stratford, Ont.

Elmira, Ont.—Messrs. Klinck's chopping and grist mill was damaged by fire recently.

Montreal.—The St. Lawrence Flour Mills Co., Ltd., will build a new warehouse shortly at a cost of approximately $30,000.

Lamp Temperatures in Modern Lighting Practice

(By J. T. Scott)
Sunbeam Lamp Div., Canadian General Electric Co., Ltd., Toronto.

THE question of temperatures of incandescent lamps has often arisen, and the subject being one of utmost importance to the elevator man on account of risk from dust explosion, the following survey will perhaps assist to a better understanding, besides proving generally instructive.

Extensive research has been undertaken to determine the extent of the hazard resulting from the use of incandescent lamps in atmospheres such as are found in flour mills, grain elevators, etc., where there is liability of dust explosions.

Fires or explosions which may be caused by incandescent lamps in dust-laden atmospheres are of two kinds: (1) Fires resulting directly from ignition of dust accumulating on the lamp bulb; (2) Explosions resulting from the accidental breakage of lamps in a dusty atmosphere containing the proper proportions of air and dust to form an explosive mixture. Such an atmosphere is frequently found where such materials as starch, oatmeal, grain, flour or sugar are handled.

(1) There is a considerable margin between the smoking and ignition temperatures of the various dusts. There are numerous conditions which determine whether or not this margin is safe, such as the character and the ignition temperature of the dusts and the temperature of the lamp bulb on which the dust accumulates.

The two tables following indicate that there is a safe margin between lamp operating temperatures and the ignition point of various dusts.

Table 1. Operating Temperatures of Mazda Lamps

Size of Lamp	Temperature of Bulb (Maximum) Deg. F.	Temperature of Bulb at Junction of Brass and Glass Deg. F.
50 Watt Vacuum ..	153	113
75 Watt Gas-filled .	240	181
100 Watt Gas-filled .	262	183
150 Watt Gas-filled .	338	150
200 Watt Gas-filled .	330	171

Table 2. Margin of Temperatures of Various Dusts

Name of Dust.	Smoking Temp. Deg. F.	Ignition Temp. Deg. F.	Difference between Smoking and Ignition Temp. Deg. F.
Sample No. 1 ..	288	511	223
" 2 ..	298	536	238
" 3 ..	295	532	237
Cornstarch	284	891	607
White Wheat Flour	315	919	604
Cornmeal	311	934	623

Sample No. 1:	Sample No. 2:	Sample No. 3:
20 p.c. oats	60 p.c. oats	
40 p.c. winter wheat	35 p.c. winter wheat	40 p.c. winter wheat
10 p.c. hard wheat	5 p.c. rye	35 p.c. barley
30 p.c. miscellan's		25 p.c. oats

The smoking temperatures are about the same as the operating temperatures of the smaller, or lower wattage gas-filled lamps, but are 100 to 150 degrees higher than the bulb temperatures of vacuum lamps of corresponding wattages. From this it can be seen why dust smokes readily on gas-filled lamps and not on vacuum lamps.

It will be noted that the temperatures at which most dusts will ignite, are more than 300 Fahrenheit degrees above bulb temperatures of the 75 watt and 100 watt gas-filled lamps. Experiments conducted in a compartment where a permanent dust cloud was maintained showed all attempts to start a fire with the 75 watt and 100 watt gas-filled lamps, or with vacuum lamps up to and including 100 watt sizes, as unsuccessful.

The temperatures at which some of the other dusts will ignite are more than 700 degrees F. above the bulb temperatures of vacuum lamps, and more than 600 degrees F. in the case of the 75 watt and 100 watt gas-filled lamps.

Vacuum lamps may generally be considered safe. The 75 watt gas-filled lamp would hardly be expected to cause a fire when suspended in a freely circulating atmosphere. With the larger wattages and drier dusts, the margin of safety might be so reduced that there would be a possibility of fire.

There is far less hazard in the general lighting system than in the practice of using lamps on drop cords. At times, lamps are allowed to become actually buried in bins of grain and the like, and the fire risk is, of course, greatly increased.

(2) The possibility of fire from accidental breakage of lamps is of much greater importance than that resulting from the collection of dust on an incandescent lamp bulb.

It is only on rare occasions that lamps are broken otherwise than by accident or careless usage. The use of an unprotected lamp at the end of a portable cord in a dusty atmosphere is careless in the extreme.

Protection Against Breakage.

Whenever there is the possibility of an explosive dust cloud being present, incandescent lamps should be provided with protection against breakage. Vapor-proof units give some degree of protection. A wire guard for the globe of the vapor-proof fixture will greatly increase its resistance to breakage. The essential point in this connection is that the filament of the lamp should be so protected that there is no possibility of its becoming exposed to the dust-laden atmosphere.

The incandescent lamp is by far the safest illuminant in existence for use in these locations, but its application has been given too little attention up to the present time. Properly installed and properly used, it will be found to fill all requirements.

Soon after the gas-filled lamp was introduced in the early part of the year 1914, criticisms began to be heard because of the greater amount of local heat developed. The bulb which felt hot to the touch, the extreme brightness of the filament, and the larger power consumption combined to make the fire hazard appear greater than it really was. In some districts, local inspectors formulated rulings

which were so strict that the installation of gas-filled lamps was greatly hindered.

Almost invariably, rules relating to the installation of gas-filled lamps contained a reference to ventilation, which was expected to lower the temperature of the unit.

There is no doubt that ventilation, however slight, usually cools the lamp bulb and some parts of the unit to a certain extent, but this is ordinarily accompanied by a corresponding rise in the temperature of the other parts. A considerable number of tests indicate that ordinary ventilation does not always cool the wire and socket parts, but actually raises their temperature in many instances.

There will be appreciated the big advantages of keeping a unit tight so as to reduce dirt accumulation, improve the light efficiency, etc., and there are many well designed types of enclosing units with temperature actually less at the socket and wire entrance due to non-ventilation.

It should be recognized that radiation is just as effective in dissipating heat as ventilation—in fact, the "chimney effect" of ventilation often increases the temperature of the very parts it is desired to keep cool.

The growing tendency on the part of fixture manufacturers toward non-ventilation units is evidenced by the number of such units as have been placed on the market within the past year. By taking care of heating through radiation rather than ventilation, marked progress has been made, not only toward better control of temperatures, but in the direction of slower dirt accumulation, greater ease of cleaning, better appearance, and greater accessibility in handling the unit.

The incandescent lamp is the most reliable of all modern illuminants, and it is hoped that the information given here will prove a satisfaction of any doubt that may be felt with regard to conditions of safety and the operating temperatures of such lamps.

CUTTING TRUCK UPKEEP CHARGES

If every milling company that operates a fleet of motor trucks took into consideration the fact that it is possible to save 50 per cent on maintenance charges and add 100 per cent to the life of each truck by attending to small repairs, inspections and overhauling at the proper time, it would not be difficult to see the money-saving advantages in establishing a good repair shop.

A few trucks, however, say, up to three or four, will not ordinarily justify this expense, yet in this case, provision for these items must be made in connection with an established garage. But where the number of trucks exceed this, a repair shop will pay for itself within a very short time.

There are as many methods of truck maintenance as there are fleets of motor trucks No two operators adopt exactly the same policy. Here it might be said that this is one good reason why some companies receive excellent service from their trucks, others fair and others poor.

There are some operators who do not believe in doing anything until something happens to the truck, saying, "Let it run until it needs repair and then do all the work at once." These operators are usually the ones that do not maintain repair shops and quite naturally they do not feel that it is necessary to take the truck time and to pay the cost of regular inspections by an outside mechanic. They neglect to consider that while the cumulative effect of troubles in their early stages seem important, the time and cost of lengthy overhauls that will invariably result, are considerably greater.

Inspect Something Every Day.

Properly cared for every day, or perhaps every week, in addition to doing the necessary smaller repairs immediately, a truck will probably not require any such thing as a complete overhaul at the intervals usually deemed necessary. In certain truck fleet shops the work of inspection and repair is done by units, which is a satisfactory method of working. On Monday, for example, all axles are gone over, on Tuesday the clutches, on Wednesday, the ignition, carburetion, motor supports, etc., on Friday lubrication and tightening, and so on through the week. This is a satisfactory method, provided that, in addition, any trouble reported by the driver or tester is given immediate attention, whether it is on the schedule or not. One cannot tell when certain troubles will come up, and it will mean a loss of time and money to make a repair or adjustment wait its turn.

Every truck operator should see to it that no truck is allowed to run for more than 24 hours with a loose part, a part likely to break, a part needing adjustment or replacement. This means that a daily inspection should be made or the driver consulted as to any irregularities of running. In this way any trouble is caught immediately and before there is time for it to develop into something more serious. Inspection on the garage floor with the engine idling is not enough; that is why the driver should be consulted. A knock may have developed in the engine, in a universal joint or in the rear axle or countershaft. No doubt the knock would not cause interference with truck operation the next day, but if it is not investigated and stopped that knock may mean the breakage of a gear, a connecting rod or what not.

Dependence on a garage or a service station is satisfactory only in one respect. It is a place where work may be done. But these stations and garages are not able to fix up a truck and get it back to the owner in quick time. This brings out the importance of providing a repair shop equipped with adequate tools and placing it in the charge of a reliable mechanic.

MANCHURIAN FLOUR OUTPUT DROPS

Vancouver.—Latest flour and grain news reaching here from Manchuria is encouraging to Canadian exporters to the Orient, though not very cheering to Japanese who have invested in Manchurian flour mills. There are forty-five milling companies operating in that country with a capacity of nineteen million sacks. Forty per cent. of the mills are owned by Japanese. Of late the output has dropped one-third and it is said if the condition continues much longer the mills will be closed.

The reason given for the depression is that the Manchurian wheat is exported largely, thus making the price to the home mills very high, and permitting Canadians and Americans to send large quantities to the wheat province and undersell the Manchurian millers.

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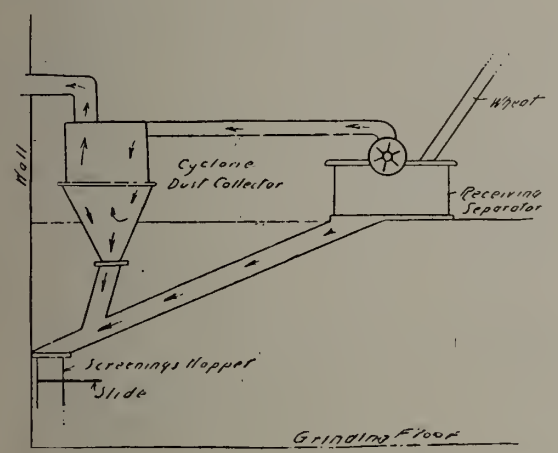
DUST COLLECTOR ON RECEIVING SEPARATOR FOR CUSTOM MILLS

The idea of the installation of the dust collector on receiving separator is that all the screenings can be sacked from the same hopper on the grinding floor, and the farmer or any other patron can get all the chaff and light screenings that would otherwise be blown outside the mill.

In custom mills where the farmers bring their grists for exchange, as a rule they practically know how much wheat they have. If their wheat is very dusty, the separator fan will blow several pounds of trash outside the mill where there is no dust collector connected with the separator. That makes a difference in the weight of the wheat and screenings, and sometimes is the cause of an argument.



If a dust collector is rigged up for the separator fan to blow into, and the screenings that settle in the dust collector are sprouted to the same hopper that the screenings from the sieves run into, then there would be very little difference in the weight of the wheat before cleaning and the weight of the wheat and screenings after cleaning.

The ultimate result is more satisfied customers, and satisfied customers mean more business, and business is what the most millers are after.

THE DEVELOPMENT OF LUBRICATION

The cylinders of steam engines and pumps were formerly lubricated by tallow. It was put into all brass cups that fed it irregularly, as there was no way provided for regulating. The acid in this tallow would eat off the heads of follower bolts, and soften the whole piston until it became necessary to renew it long before it was worn out. For years, this was considered a necessary evil, but somebody tried oil of a high fire test, and found better results.

The next step was to provide oil pumps for forcing this oil against pressure. This was a great improvement because it was possible to offer an apology for regulating the quantity used. This was followed by the lubricator from which the oil was floated by utilizing the principle that causes oil to rise to the surface when put into a vessel containing water. A gauge glass was added but the sight feed was an after consideration.

Regulating the Supply of Oil.

When a good sight feed lubricator is properly installed, it is possible to regulate the supply to exactly meet the demands of the engine, and keep the internal parts in good condition. When a force feed oil pump is installed, and the engineer reports a great saving of oil, it proves that he was using much more oil in his sight feed lubricator than is necessary. The engine really requires as much with one device as the other. It may be possible to regulate the feed better with one of them, but that is a matter of adjustment by the engineer.

Filtering Oils.

The practice of using oil once and then throwing it on the coal pile is an economic crime, for which there is no excuse. Filters can be bought for such a low price that enough oil can be saved by them to repay their cost in a short time, after which their use is clear gain.

The lubricating qualities of oil are not destroyed by using it once. Of course it becomes unfit for further use on account of the accumulation of dirt of various kinds, and when this is removed, the oil is about as good as it was before. An ordinary filter will do this, and last for many years.

SIEVES OUT OF ADJUSTMENT

That the draught operating through a purifier will follow a line of least resistance is fully realized when, owing to the sieve being out of square to the eccentric, the stock flows to one, or either, side of the sieve, leaving, in so doing, bare spaces through which the draught expends its energy in doing nothing. Where, also, the sieve is not level crosswise, similar failures are witnessed. In the majority of cases they originate from defective adjustments of the suspension rods supporting the frame. Possibly the head pair are not in line, in which case the sieve will take up a twisting action, and jerk the eccentric. Should one side of the sieve be elevated above the other, the flow of stock will naturally incline to the lower, yet while, in such a case, it might appear obvious that the higher side needs lowering, the possibility that the reverse is necessary has also to be considered. To find stock massed at some point on the cover, is a clear indication that the latter has become slack.

A new silk especially has this tendency, and will require tightening occasionally during the first day or so it is put to work. The defect, regardless of the question of draught, usually reveals itself in specky "throughs" wherever the bunching occurs.

THE MANUFACTURE OF FLOUR

It is an acknowledged fact that many millers are excellent judges of bread. It is true also that occasions have arisen when a miller who has received a complaint from a customer as to the quality of the flour supplied has been able to prove conclusively, and to the satisfaction of his customer,

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that it was the wrong handling of the flour by the baker, and not the flour itself, which was at fault. Yet the miller does not pretend to know more about baking than the baker. The latter, however, does not scruple to tell the miller how he should manufacture flour. He has, for example, got hold of the notion that bleaching is deleterious to flour. The average baker could not for the life of him give any reasonable explanation of his opinion. He asserts that the public will and must have white bread, but he appears to think that the miller can supply flour white as driven snow without any artificial agency. If he knows how it can be done, let him say so. Those bakers who use bleaching machines know perfectly well the process is harmless, but the majority know little or nothing about it. Still that does not deter them from making preposterous demands. If they want unbleached flour, they can get it from any miller; but if they insist upon white flour, they must allow the miller to accomplish it by means which he knows are both harmless and efficient. In short, they should refrain from trying to teach millers how to manufacture flour.

SUPPORTING AIR TRUNKS

A NEAT support for an air trunk or pipe line is made by running a wire through a hole in a joist or nearby timber, and wrapping it around the part to be carried, brought back and spliced by

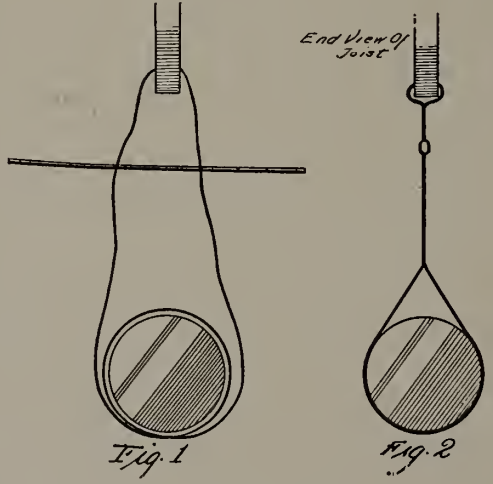

Fig. 1 Fig. 2

twisting to the other end. The wire should be fitted around loosely, as shown in Fig. 1, and then a stick placed between the two wires is twisted until the support is tight, as in Fig. 2.

THE MILL SWEEPER'S IMPORTANT WORK

The sweeper in the mill, whether the boy whose sole duty it is to keep the floors and exteriors of the machines clean, or the operative who is responsible for his own floor, should always be impressed with the importance of cleanliness, for which he is responsible. How many times during the history of milling has the color of the flour been affected by even a moderate quantity of fine, dirty dust being mixed with the "turn-outs" of chokes, and how many silks have been ruined by small pieces of metal, wood, etc., being mixed with choke material, and passing on to further machines? The boy sweeping in the mill can be of great value to the operative and to himself, for he has untold opportunities of learning milling as he uses his brush. This is the first step on the ladder leading up to the production of the master miller. It is good to say that a great number of boys avail themselves of the opportunity given to them, for it must be a matter of wonder to the uninitiated, when for the first time they realize how a boy of 15 years of age can follow the flow of a mill of considerable capacity. —"Milling," Liverpool.

GOOD FLOUR FROM INFERIOR WHEAT

Many of the processes that have been patented of late years, particularly in Europe, have for their avowed purpose, the production of good flour, from poor wheat or of good bread from inferior flour Doubtless, however, most of these processes will fail to impress millers as entirely feasible, though it is admitted that both wheat and flour may be inferior from deficiencies as well as from spoilage.

In a German scientific periodical of recent date a writer discusses the Humphries-Thomas process for treating wheat flour and seeks to show how the transformation is brought about. Although the wheat has 1.0 per cent. water added to it by this process, the final flour shows an increase of only about 0.2 per cent. moisture. It must be assumed that the water which was added is absorbed by the proteins to form a colloidal mass from which the water cannot be removed by physical methods. The water molecules are absorbed by the proteins and starch by virtue of their surface energy. Thus there are two opposing forces—(1), the surface energy of the flour particles, absorbing the water, and, (2), the water attracting itself and acting in opposition to the first force. Therefore, if water is brought in contact with this system in the Humphries process, the equilibrium is displaced in the direction of the absorptive surface energy of the flour. As a result of this, water is taken up and the flour changes its physical properties.

ROLLS, PURIFIERS AND CENTRIFUGALS

To keep smooth rolls in the highest state of working efficiency and preserve their life, the following points should be attended to:

1. They should be kept thoroughly lubricated by high-class oils. Waste oil should be drained away from the bearings at regular intervals.

2. Any wear in the working parts or bearings must be compensated.

3. Rolls should not be allowed to run with no feed on as they bump together, spoil adjustments and cause uneven wear.

4. Even feeds should always be maintained over the whole length of the roll, otherwise the miller

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loses roll surface and gets uneven wear on his rolls.

5. Efficient exhausts must be maintained, thus removing all humid air and preventing "pasting", "ringing", and "flaking" to a great extent.

6. No roller mill should be overfed, as it results in bad work and is hard on the machine.

7. Scrapers or brushes should be properly adjusted to keep the roll clean of any ground stock.

8. Rolls should never be allowed to overheat.

Purifiers.

1. Machine bearings must be kept well lubricated, especially the eccentric drive.

2. Any wear in bearings must be taken up by means of adjusting screws with locknuts. When purifiers run with loose bearings, a jolting motion is imparted to the sieve, which causes an uneven flow of the stock, resulting in bad purification. Sieve hangers must be adjusted evenly.

3. Purifiers should not be overfed. If they are, faulty work will result, as the air current will probably not be sufficiently strong to force its way up through the stock as it passes over the sieve.

4. Silk or grit gauze must be stretched tightly over sieve frames without any unevenness. The latter has the effect of impeding the progress of stock. Tightly stretched silks should also give better wear. Sieves must be kept in good state of repair.

5. The automatic sieve brush must be kept working regularly, assisted if necessary by judicious hand-brushing. When necessary brushes should be renewed, as worn brushes tend to injure the sieves, or only partly accomplish their work.

6. The machines must be kept scrupulously clean, so that air currents will be maintained at their highest efficiency, and deposits of stock cannot harbor mill infecting insects.

Centrifugals.

1. All parts to be efficiently lubricated.

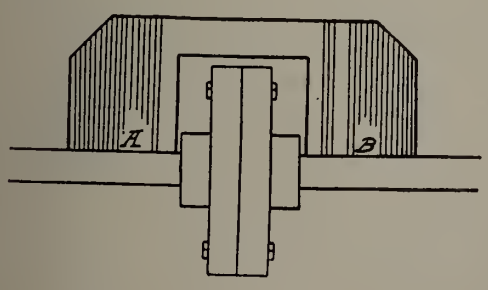
2. Machines not to be too heavily fed.

3. All inside beater bolts to be examined and tightened if necessary, whenever occasion offers.

4. Avoid chokes by keeping machinery and spouting free from accumulations of stock.

TESTING SHAFT ALIGNMENT

HERE is a handy little device for testing the alignment of two shafts which have been joined with a coupling. It is nothing less than a steel



straight edge with enough of it cut away to permit the coupling to clear it when testing. The edge AB must be a perfectly straight edge and should be tested for this frequently.

BRAN EXTRACTION FOR BREAD

Results of baking tests with bread made from the same flour (a winter wheat straight grade), but in one case using ordinary tap water, and in the other, a bran mash water extraction. The results obtained were identical with a similar test made several years ago, which I believe were also published. Since then other investigators have, I believe, seen such tests obtaining similar results, says Prof. B. W. Dedrick, of the State College (Pa.) School of Milling in a recent issue of The Millers' Review (Philadelphia).

The greatest quantity of gluten, or that which combines to produce gluten in the dough, is present in the outer layers of endosperm, and next to the bran. Unfortunately, we can not secure that immediately next to the bran without incorporating more or less impurities in the shape of pieces of very fine bran, ceraline and germ.

It occurred to the writer years ago, that more of this gluten material might be secured by steeping bran in warm water for several or more hours, dissolving off the endosperm still clinging to bran, and using the precipitate together with the fluid extract in the sponge or dough, the object in view being to ascertain what effect this would have on the fermentation of the dough, and the color volume and flavor of bread.

In the recent test a mixture of bran and shorts, containing considerable of the fine red middlings, was made into a mash by steeping in warm water for sixteen hours, well shaken at intervals, being kept tightly covered in a glass jar. At the end of that time, the fluid (pale amber in color) was decanted, and the mash squeezed, pressing out the remaining liquid which appeared starchy in color. The mash was now washed with some of the decanted fluid and again pressed or squeezed, and later this residue liquid combined with the first. The final stage was to strain this liquid through a 70 a. a. cloth to remove the branny material. The liquid was allowed to settle, the precipitate being of a white creamy color. Some of this precipitate was examined under the microscope, which appeared as starch granules, others rather undefined, with granules of ceraline.

Loaves Made in Duplicate.

The extract was well stirred before being incorporated with the flour. The loaves were made in duplicate, or two for each. One hundred grams of flour were used for each loaf, with the same quantity of liquid, yeast, sugar, etc., and these all under the same conditions.

Nos. 1 and 2 made with ordinary tap water.

Nos. 3 and 4 made with bran extract.

Nos. 1 and 2 to fermenting closet first, followed by Nos. 3 and 4, these last at the end of first rise, 90 minutes, having 50 c.c. more expansion than that of the first; in the second rise it was also higher. At the end of second rise, 45 minutes, dough went to pan. Nos. 3 and 4 went to oven five minutes ahead of Nos. 1 and 2. Weight of dough to pan 156.7 grams.

THE PRACTICAL MILLER

Table below gives averages of loaves in each case:

Samples	Grams Bread	Volume c.c.	Color	Texture	Crust	Flavor
Nos. 1 & 2.	140.9	50.50	100	100	100	99
Nos. 3 & 4.	142.5	535.0	98	100	100	100

The color of the first batch was white, that of the second was creamy. The texture in both cases was the same, as was also crust appearance, a golden brown. If anything the last was a very slightly deeper color.

The flavor of the last had a somewhat nutty flavor, pleasing to the taste.

It will be observed the last two made more bread with larger volume than the first.

SIMPLE DEVICE WILL PREVENT OVERHEATING OF BEARINGS

Flour mills or elevators having chain oilers or ring oilers in the shaft bearings or in the bearings of different machines throughout the plant have found out that these need attention as well as other kind of self oiling devices, for if sediment is allowed to collect in the reservoir it will cause trouble. The dirt will be carried to the bearing and in time will accumulate to such an extent that it will cause the ring or chain to stick in this thick matter. Then of course, there will not be any oil, good or bad, carried to the shaft, and heating must ensue.

The same trouble will sometimes occur from using too heavy an oil. Or in cold weather, when the mill is standing idle part of time, some oils will become thick, holding the chain or ring.

A good way to overcome the trouble of having heated bearings from these rings or chains is to provide a positive chain oiler for the bearing. Just an ordinary inexpensive brass chain can be used; this is run over a sprocket made by draw-punching teeth in a strip of sheet brass having a length equal to the circumference of the shaft.

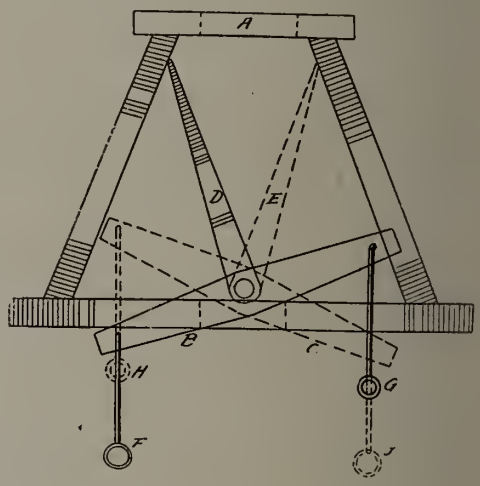
A little figuring on the stretch of the brass strip may be necessary to get the correct spacing of the teeth at the joint. The sprocket is held on the shaft by soldering, or escutcheon pins may be driven through the sprocket band.

GROWLING ROLLS AND THEIR REMEDY

One of the most nerve-racking noises on the roller floor is caused by what is known as groaning, or howling, rolls. Under normal conditions of working rolls do not groan, and there is no great difficulty in stopping the noise if you can find out the cause. The chief cause is excessive pressure with heavy feeds, or in attempting to make the rolls do more work than they are able to do. Sometimes it is caused by unequal pressure; that is, heavier pressure at one end of the rolls than at the other. It may also be caused by unequal feeds, or the feed being thicker in one part than another. But whatever the cause it is unnatural and unnecessary, and whenever the trouble exists it should be at once remedied, either by lessening the pressure or arranging the feed. The growl is not the trouble, it is only the expression of the trouble, as the moan is the expression of pain in a human being. Overloaded and unevenly-fed rolls are, however, very destructive of power, and must, as a matter of course, produce inferior results. When the trouble is chronic, as it is in some overworked mills, it can only be properly dealt with by either reducing the wheat feed or enlarging the capacity of the particular rolls which give trouble; or perhaps it would be best to first try the experiment of making a more even distribution of the feed to individual rolls, as overloading is the chief cause.

RIGHT HEIGHT FOR VALVE STRINGS

WHERE valves are high and have to be operated by strings or ropes it is a great convenience to set the valve in the middle and then cut the ropes or strings so they reach to exactly the same height. It is also very convenient to have two small weights so the strings are kept stretched. Pull down either weight, as at F, and the other weight will be pulled



up to G and the grain entering at A will be discharged at C. Now pull G down to J and F will be pulled up to H and the grain will be discharged at B.

A MILL EXECUTIVE'S SUCCESS

Like one of the Alger books—but it is true—and it is possible for every ambitious young man—is the story of Mr. C. R. Heaney, district sales manager for The Weber Flour Mills Corporation with offices in the Putnam Building, Davenport, Iowa. Seven years ago he was making less than a thousand dollars per year; within three years afterwards he was making more than $8,000. Mr. Heaney received his training through the Business Administration Course of the largest business university in the world, La Salle Extension University of Chicago, a school with a yearly enrolment of more than 60,000 and with more than 3,600 graduates each year.

THE PRACTICAL MILLER

VARIATIONS OF PRESSURE IN GAUGE READINGS

A certain flour mill engineer was troubled by a difference in showing between two steam gauges, both connected to the mill boilers, but located in different places. One of the gauges was located at the boiler and connected direct thereto in the usual manner by a small pipe which was tapped into the top of the boiler and had no connection to anything save the steam gauges.

The other gauge was located in the mill, near the office and was connected to the same small steam pipe but this gauge almost invariably showed a greater pressure than the boiler-room instrument. In order to make sure that the gauges themselves were not out of adjustment, the engineer temporarily connected both gauges side by side and both indicated the same pressure.

Both gauges were connected side by side in the boiler room, and again in the mill, and when thus placed, both gauges indicated the same pressure. But when one was placed in the mill and the other at the boiler, the former gauge indicated about five pounds more pressure than the gauge at the boiler.

Indicated Same Pressure.

The engineer also discovered another queer bit of behavior on the part of the mill gauge for when that gauge was first disconnected again after having been removed from its pipe, it indicated exactly the same pressure as the gauge at the boiler. But in an hour it was five pounds heavy again.

The engineer found that when he did not let any water escape from the mill connecting steam pipe, that the gauge attached thereto was heavy, but when the water of condensation was allowed to escape from the pipe, the gauges would indicate alike until the pipe had again filled with water of condensation, when the mill gauge would again show five pounds pressure more than the boiler gauge.

He soon figured out that the different pressures registered were due to water of condensation, none of which was in the gauge pipe immediately after the gauge had been disconnected, but which filled the pipe as steam condensed therein. The engineer found, upon looking up the matter in a reference book, that a column of water one inch square and one foot high, exerted a pressure of .433 pound per square inch, or in other words, the described column of water weighed that fraction of a pound.

The engineer also found that a pipe one foot high, and no matter of what diameter would exert a pressure upon the gauge of .433 pound when filled with water. The vertical pipe 12½ feet high, when filled with water, should cause the steam gauge to show a pressure of 12.5 x .433-5.5125 pounds, due to the static pressure of the column of water in the gauge pipe and, as explained above, it does not matter whether that pipe be a quarter of an inch or ten inches in diameter.

Boiler Gauge Too Heavy.

The engineer soon noticed that the pressure shown by the mill gauge never quite agreed with the above calculations, as that gauge never indicated an excess of quite five and a half pounds. A trifle more than five pounds more was the most that gauge ever would show and, in casting around for the reason therefor, the engineer finally realized that the boiler gauge was a bit heavy also, owing to the fact that this gauge also had a water column above it of a height of six to eight inches, and this was the reason that the difference in the readings of the two gauges was about five pounds instead of five and a half.

A bit of figuring showed the engineer that to find the pressure of water in a tank, he had only to multiply the head in feet by 62.4. But when he wanted the pressure in pounds per square inch, he must needs multiply by .433 as above stated, for the reason that 62.4 divided by 144 equals .433.

He also found that when he wanted to change feet of water-head into pounds per gauge, or pressure per square inch, he had only to divide the height of the water column in feet by 2.309 and the result would be the gauge pressure above the atmosphere. Looking around for the source of the factor 2.309, the engineer found that it came from dividing 1 foot by .433, the weight of a square inch of water one foot high. Therefore it is found that it requires a head of 2.4 feet of water to give a gauge pressure of one pound per square inch.

Vacuum Measurements.

In about the same manner the engineer, skirmishing among figures, found that to change the vacuum head of water into inches of mercury, it was only necessary to divide the inches of mercury by 1.13 and the resulting quotient will be the vacuum head of water required. Transversely, to change vacuum head in feet of water into inches of mercury, multiply 1.13. Furthermore, to find the vacuum pressure in pounds per square inch, the engineer multiplied the inches of mercury by .49.

To find these constants, the engineer looked up the specific gravity of water and of mercury and found them to be 1 and 13.59 respectively. As the height of the water column is usually given in feet and that of the mercury in inches, the engineer divided 13.59 by 12 (the number of inches in a foot) and obtained the constant 1.13 noted above.

But to obtain the factor .49, the engineer divided the weight of a cubic foot of water—62.4 pounds—by 1728, the number of cubic inches in a foot. The result was 0.03611 pounds, the weight of a cubic inch of water. Multiplying this by 13.59 gives the factor 0.4907349, of which the portion 0.49 is used as above directed for obtaining vacuum pressure in pounds per square inch from inches of mercury.

ROUGHING BELT JOINTS

When a belt is to be glued and the joint is planed and ready to be placed for glueing take a compass saw and drag it several times side ways with the teeth against the belt. This roughs the joints to be glued and a better and stronger joint is made as the glue settles in the roughened surfaces making a firm binding.

THE PRACTICAL MILLER

CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

ENERGETIC and thoroughly competent mill and sales manager, now in charge of 200-barrel mill in Western Canada, seeks responsible position with live Canadian milling company. Ten years road and sales experience with large Canadian mill. References furnished. Reply Box 120, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

SALESMAN AVAILABLE for the Province of Quebec. Excellent connections in Quebec City and district. Has had several years experience and has represented several leading firms. Can furnish best of references. Reply Box 114, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED — By Head Miller, with 20 years practical experience in modern Canadian mills up to 4,000 barrels capacity. Can guarantee best results as to quality and yield on both hard and soft wheat, and maintain mill at highest point of efficiency. At present in charge of a 1,000 barrel plant. Reply Box 85, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

PRACTICAL MILLER with 23 years experience seeks position with plant having daily capacity of 250 barrels or upwards. Can furnish excellent references. Reply Box 82, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—A 50-barrel Midget Marvel Mill, also complete installation of a flour milling plant. In use about three months. Machinery must be moved from actual premises. Good price for cash. Reply Box 103, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Head miller, with twenty years experience in 150 and 275 barrel mills, and still employed, is desirous of making a change. Applicant is 36 years of age, married, and can furnish excellent references. Reply Box 84, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

WANT TO BUY a complete grain elevator, with belting and cups. State size and particulars. Box 49, "Canadian Milling & Grain Journal," Dubrule Bldg., Phillips Square, Montreal.

RYE FLOUR WANTED — State approximately quantity could ship regularly. Box 118, "Canadian Milling & Grain Journal," Dubrule Bldg., Phillips Square, Montreal.

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WATER POWER FOR SALE.—One thousand horsepower on three leading Canadian railways and Great Lakes waterway. Less than 5 per h.p. per year. Elevator close. Town of five thousand population. Situated in Old Ontario. Reply Box 111, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

POSITION WANTED as head miller in a small or medium sized mill. Applicant has had twenty years' experience. Thirty-seven years of age. Reply Box 110, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

ONTARIO MILL has opening for flour salesman. State experience and salary wanted. Reply Box 117, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—Sixty Barrel Stratford flour mill, Allis Rolls, Whitlaw Flour Sifter, Packer, Cockle Machine, etc., all in good running order. Full particulars and price on application to The Pearce Co'y, Ltd., Marmora, Ont.

FOR SALE — Flour mill machinery. Practical enough to fully equip small mill. All modern and in good shape. Attractive price. Reply Box 116-6, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

SALESMAN, with first-class knowledge of flour and feed trade in the Maritime Provinces is available for engagement. Results guaranteed. Excellent references. Reply Box 113, "Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

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Several years experience as principal in Ontario and western grain business, also feed manufacture and distribution; thorough knowledge of French; conversant with grades, options, premiums, hedges, freights and carrying charges. Wants to connect with first-class grain or milling concern. Reply Box No. 115, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Miller, thirty-seven years of age, is open to take charge of small or medium-sized mill, or to take position as second miller in large plant. Has had twenty years experience. Thoroughly familiar with all branches of milling. Can furnish excellent references. Reply Box 107, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

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THE PRACTICAL MILLER

The Question Box

QUESTION.—How should grinding be done to keep ash content of flour down to a minimum?—A. E. C.

ANSWER.—There are many things which go to reduce the ash content in flour besides the operation of grinding alone. The foul seeds must be cleaned out of the wheat, the whiskers must be scoured from the berry. To do this you must have a scourer which will work on the ends of the berry. Then you must know how to use warm water in winter, or even in summer, if the wheat can't lie in tempering bins long enough so that the moisture will have time to penetrate and bring about desired results.

What are desired results in tempering? Tough bran, toughen the entire outer covering. If you will cut a grain of wheat crosswise or split it through the centre you will see that the bran covering reaches almost clear through the berry and that if you wish to toughen all this bran you will have to allow time for the water to act. Warm water will act quicker and is recommended where short time tempering is possible only, due to bin room. Warm water is best in cold weather since it will act quicker on cold wheat than cold water would on cold wheat. But if the weather is hot and you have plenty of bin room and allow from 24 hours and up for tempering cold water will do very well.

* * * * *

Now about grinding to keep down ash content. If breaking is grinding then this is at least one place where care and judgment must be exercised. The head miller in the large mills tells us how to break in a five-break mill. So far so good. But this will not help out very much in the small mill where there are but three and perhaps only two breaks. It is certain that the three-break miller must do different than the five-break miller. Too often the three-break miller is trying to do good work with rolls that are dull, and he tries to make himself believe that since the rolls are dull he will not cut up the bran and produce bran powder.

When the rolls are dull it is necessary to exert heavy pressure. Pressure will produce ragged, soft, mushy middlings which will contain a lot of small bran particles, and the bran particles will follow all through the smooth roll reductions, and at each grinding these bran specks reduce to powder and bolt into the flour. It is absolutely wrong to run with dull break rolls. First, they do poor work. Second, the extra power consumed will pay for the cost of corrugating in a very short time. Third, dull break rolls create heat, cause sweating of the rolls and spouts, cause musty smell, clog bolting cloths and make a mess all around.—E.M.

"Why is Alice so short of money; didn't her father leave her a lot?"

Madge—"Yes, but you see she's not to get it till she's 30 and she'll never own up to that."

A colored preacher in Alabama had at one time served a short jail sentence and was fearful lest his congregation discover the fact. In his later years he had been a model of rectitude.

One Sunday, rising to begin his sermon, his heart sank to see a former cellmate sitting in the front row.

Quick thinking was necessary. Fixing his eye on the unwelcome guest, the preacher announced solemnly:

"Ah takes ma text dis mo'nin' from de sixty-fo'th chapter and fo' hundred verse of the book of Job, which says: "Dem as sees and knows me, and says nothin' dem will Ah see later."

TODAY'S BEST STORY

"Wouldn't you like a nice picture of all your children in one group?" enquired a travelling photographer of a farmer's wife.

"How much do you charge?" queried the woman.

"Five dollars a dozen," replied the photographer, sensing an order.

"I'm sorry," the woman exclaimed, "but you had better come around next year. I've only got eleven."

"All the little boys and girls who wish to go to heaven," said a Sunday school superintendent, "will please rise."

Whereupon all, with the exception of Sammy Scruggs, rose.

"And doesn't this little boy want to go to heaven?" asked the superintendent.

"Not yet!" said Sammy.

Rufus Redd Dogg

"Th' ol' lady she sez, sez she t' me a while back," declared Rufus, "thet ez et wuz all o' forty year—not sence we wuz marrit, in fact—thet I hed taken a lay-off, thet I shud hire a dusty f'r a few days an' go fishin'."

"Well, sirree, I hire's a roustabout thet dom near got ground inta flour th' fust time he went near th' mill, but I larned him a little an' left him t' it. Th' fust day o' me vacaytion I shingled th' ol' barn, whitewashed th' house, fixed up th' garden a bit, walked ol' Bobs t' th' smithy f'r a new set o' shoes an' in th' evenin' milked twelve cows. Durin' th' intervenin days I rebuilt 'bout half a mile o' snake fence, helped at two barn raisin's, mended th' buggy and put a new roof on th' mill, besides riggin' up a new pump, sawin' 'bout fifteen cords o' wood, cleanin' all th' windeys in th' house and mendin' a few odd bits o' furniture. I fergit t' mention thet th' dusty dissypeared th' second day an' o' course hevin' no one round I hed t' keep me eye on th' old mill, tend t' customers an' make meself gene'lly useful. I tell ye, I wuz right glad when them hollidays wuz over . . . yes . . . sirree."

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CANADIAN
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JOURNAL

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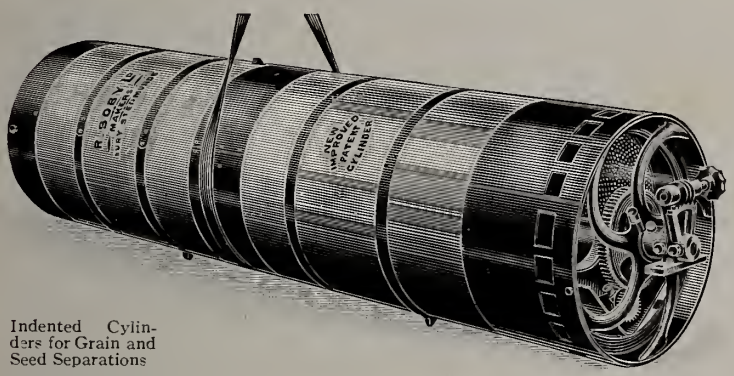

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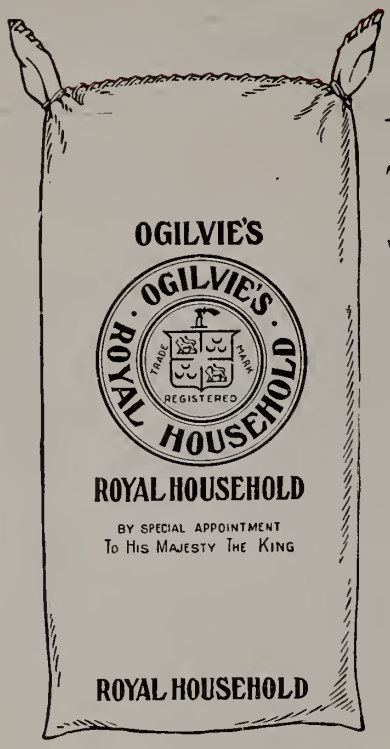

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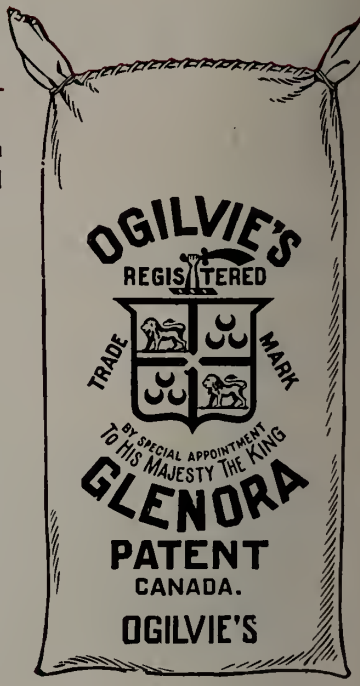

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Are you opening grain doors by hand? So is everyone else, but that day is past.

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View of Peerless Cereal Mills Ltd. Woodstock, Ont.

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The Proper Material for Elevators

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There are other features of Concrete almost equally important to the grain business. It is fireproof, and rat proof. Moreover, it readily adapts itself to the various types of tank and elevator most suited to the local conditions—is readily moulded to the shape and proportion its designer desires for the particular purpose for which the structure in intended.

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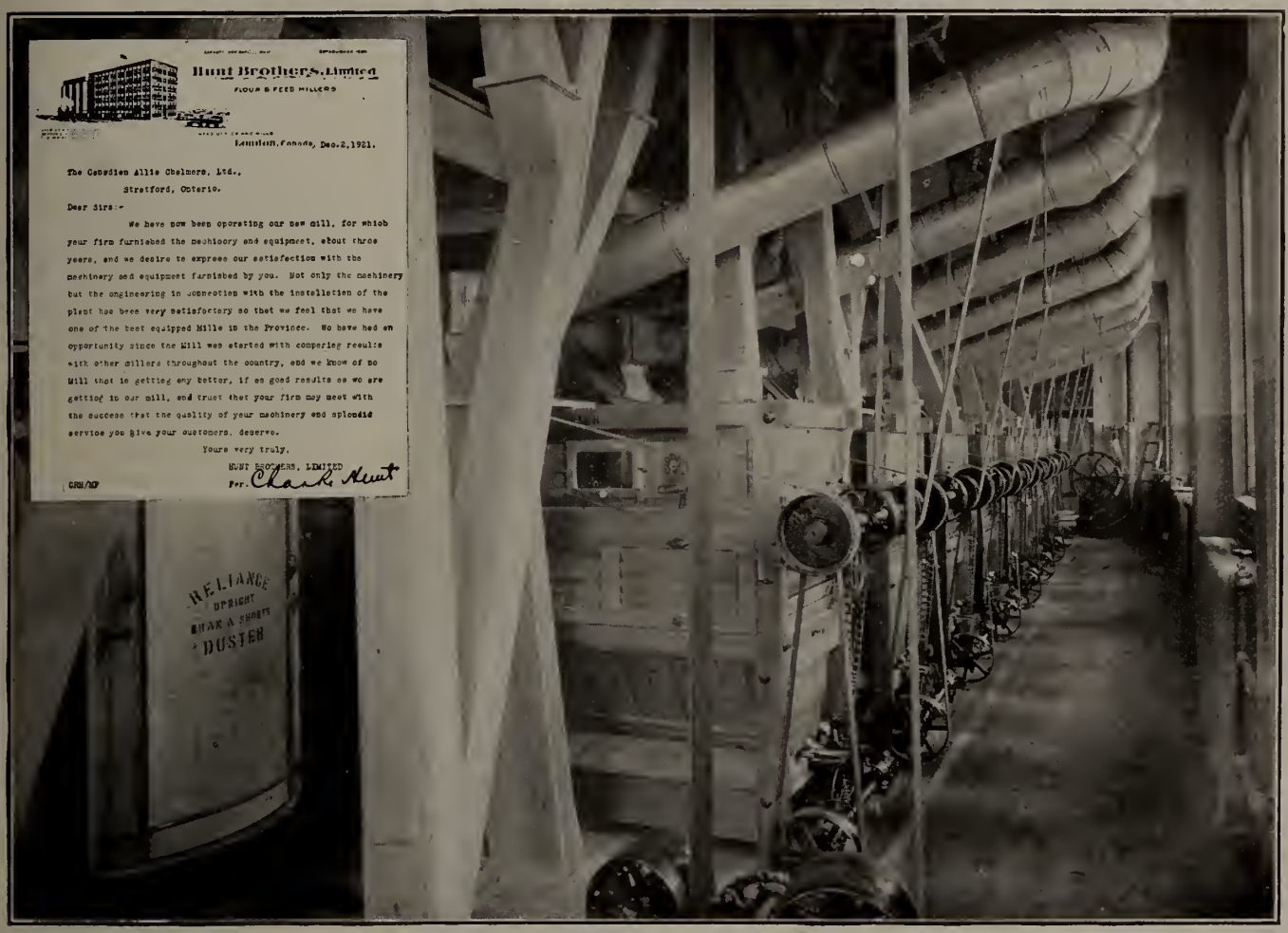
TANCREDE BIENVENU

Read Hunt Bros. letter regarding their Mill after three years continuous operation.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FLOUR & FEED MILLERS
London, Canada, Dec. 2, 1921.
The Canadian Allis Chalmers, Ltd.,
Stratford, Ontario.
Dear Sirs:-
We have now been operating our new mill, for which your firm furnished the machinery and equipment, about three years, and we desire to express our satisfaction with the machinery and equipment furnished by you. Not only the machinery but the engineering in connection with the installation of the plant has been very satisfactory so that we feel that we have one of the best equipped Mills in the Province. We have had an opportunity since the Mill was started with comparing results with other millers throughout the country, and we know of no Mill that is getting any better, if as good results as we are getting in our mill, and trust that your firm may meet with the success that the quality of your machinery and splendid service you give your customers, deserve.
Yours very truly,
HUNT BROTHERS, LIMITED
Per: Chas. R. Hunt
CRH/NP
RELIANCE
UPRIGHT
BRAN & SHORTS
DUSTER

PURIFIER FLOOR IN HUNT BROS.' 1,200 BBL. MILL AT LONDON, ONT.

MAY WE HAVE THE PLEASURE OF INFORMING YOU OF THE SUCCESS THAT OTHER MILLERS ARE HAVING WITH OUR :: :: EQUIPMENT :: ::

CANADIAN ALLIS-CHALMERS LIMITED

STRATFORD, ONTARIO

The Strong-Scott Mfg. Co., Limited, Winnipeg, Man.

WESTERN REPRESENTATIVES

1920 was a good year

1921 was a better year

1922

Will be a bumper year for Canada's Milling and Grain Handling Industries

Don't you want to get in line early for your share of this trade?

You will probably get some but you will certainly get more if you advertise in

CANADIAN MILLING & GRAIN JOURNAL

Rates on application.

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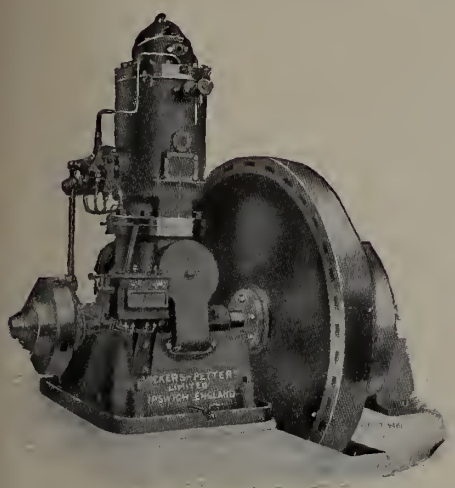
Vickers-Petter Oil Engines

(PETTERS' PATENTS.)



PETTERIZE YOUR POWER PROBLEMS

What do you pay for power when business is slack? Big savings can be made in power bills by installing a Vickers-Petters Semi-Diesel Crude Oil Engine in Mills subject to fluctuating demands for power.

A Vickers-Petters Engine will drive your Chopper cheaper than any other form of power.

Facts to remember about
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A compact self-contained power unit.
Economical.
Quick and easy to start.
Long Life.
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RENOLD CHAIN DRIVES

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Cut shows installation of 26 Renold Drives operating Conveyors and Elevators.
Installation made over 12 years ago and still giving entire satisfaction.

Write for booklet "Notes on the Selection of Chain Gear". Immediate deliveries from Canadian Stocks.

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The St. Lawrence Flour Mills Co.

LIMITED

CANADA'S MOST MODERN AND BEST EQUIPPED MILLS
MAKERS OF CANADA'S MOST POPULAR BRANDS OF FLOUR

Regal

A high quality bread flour sold in bags of 7, 14, 24, 49 and 98 lbs. and in barrels of 98 and 196 lbs.

Quotations on car lots requested.

Fleur de Lis

A high grade bread flour sold in 98 lbs. bags and in 98 and 196 lbs. barrels.

The baker's favorite from Coast to Coast.

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Fully seventy-five percent of our business comes from concerns who are already users of Invincible machines. Among them is listed a great majority of the nationally known mills and elevators. Pretence or unfairness could not hold their trade.

They know that when purchasing a grain cleaner, dust collector, flour or bran packer from us, that they are not merely buying a machine. They are also buying generations of experience.

They expect more of an Invincible machine and get it.

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Capacity 1200 barrels daily

HUNT BROTHERS

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Manitoba Spring Wheat Flour

Ontario Winter Wheat Flour

Hunt's Flour "Becomes a Habit"

The Reason Why!

Morse Silent Chain Drives

Operate in practically all Grain Elevators and Flour Mills in Canada is because of their Frictionless Rocker Joints. Oil Baths not necessary.

Immediate deliveries.

Write for Catalogue.

Jones & Glassco, *Reg.*

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— use —

Pedlar's Corrugated Iron Siding

If you are contemplating any reinforced concrete construction it will pay you to investigate Pedlar's "Perfect" Steelcrete, the ideal expended metal reinforcing. Write for our complete Reference Catalog illustrating our full range of "Perfect" Sheet Metal Products for modern fire-proof construction.

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(Established 1861)

Executive Office and Factories:—OSHAWA, Ont.

Branches:—Montreal, Quebec, Halifax, St. John, Ottawa, Toronto, Winnipeg, Calgary, Vancouver.

ARE your Flour Bags made in Canada? Canadian Flour should be packed in Canadian Containers. Have you seen the Lincoln Improved Flour Sacks? If not, we will gladly send you samples.

All Rope Flour Sacks Cream, White Coated and Blue Lined

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Samples and Prices gladly sent on request

Lincoln Mills, Limited.

MERRITTON, ONT.

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ROBIN HOOD TRADE MARK

MILLERS OF

High Grade Western Canadian

SPRING WHEAT FLOUR

MILLS AND WESTERN OFFICES AT

MOOSE JAW, SASK.
CALGARY, ALBERTA

COMBINED DAILY CAPACITY

5,000 BARRELS FLOUR
1,500 BARRELS OATMEAL AND ROLLED OATS

HIGHEST QUALITY

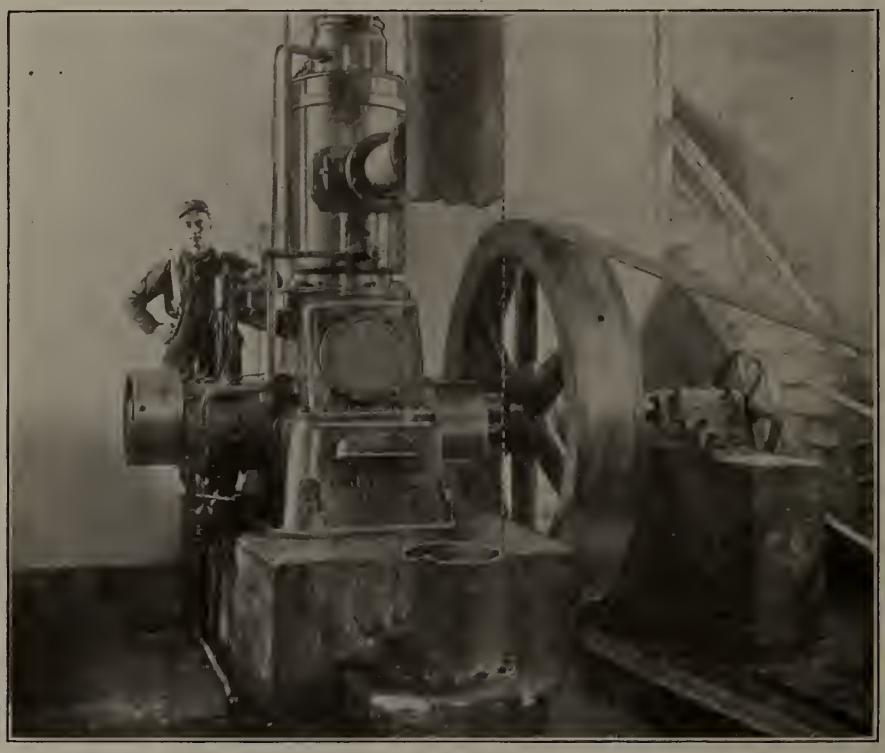
ROLLED OATS AND OATMEAL

EASTERN SALES OFFICE

MONTREAL, Canada

Cable Address: "Fabean"

Fairbanks-Morse Type "Y" Oil Engines



Lower Power Costs

Actual experiences of millers throughout the country, show that Fairbanks-Morse Type "Y" Engines furnish dependable power at the lowest cost per barrel. In many instances, the total cost of repairs, over a period of several years, was practically negligible.

These facts prove that Fairbanks-Morse Type "Y" Oil Engines are the ideal power units for millers, because they cut fuel costs to a minimum and save the expense of engineers, firemen, removal of ashes, leaks in tubes, etc. Water power is the only competitor of Fairbanks-Morse Type "Y" Engines.

Find out about this dependable power. Write for catalog and any special information you need.

TEAR OUT AND MAIL NOW

The Canadian Fairbanks-Morse Co. Limited,
(NEAREST BRANCH)

Without any obligation on my part, please let me know how Type "Y" Engines lower power costs in the milling and grain business.

Name .....

Address .....

The Canadian Fairbanks-Morse Co. Limited

Canada's Departmental House for Mechanical Goods

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CANADIAN Milling & Grain JOURNAL

Montreal:
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Published on the 1st and 15th of each month.
Devoted to Milling, Grain and Allied Interests.

E. J. HOLLIDAY, *Publisher.*
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VOL. III MONTREAL, AUGUST 15TH, 1922. No. 14

CANADA'S ONLY MILLING AND GRAIN PAPER

Rocks Ahead for Wheat Control

IF there never previously was on record an example of what getting out from under means, one surely has been found in the present impassé regarding the establishment of a wheat board to handle the 1922 crop. After having cost weeks of Committee and House work in Parliament at Ottawa, not to mention the expenses of innumerable delegations and of special sessions of the Alberta and Saskatchewan legislatures to implement the legislation adopted at the Capital last spring, the fact that not one man of the many in the country who were shouting themselves hoarse for wheat control can be found who is willing to assume the chairmanship of the proposed board has created a situation which can only be described as farcical. What must be the opinion of foreign countries which have been following developments here had best be left to the imagination.

There are, apparently, plenty of wheat marketing experts in the west who, while not averse to political preferment or a pat on the back from the powers that be, are unwilling to accept a doubtful responsibility.

If the frantic search for a chairman alone did not threaten to wreck the whole scheme of control, the refusal of the Manitoba Legislature to have anything to do with the proposition has hastened the smash-up rather than retarded it.

"Canadian Milling & Grain Journal" expresses the opinion that the chief reason why no one can be found to take charge of the proposed board is because no one eligible for the position really believes that control as planned will ever become effective. Grain men throughout the country are not going to stand idly by and watch the operation of what they have good reason to know will mean the end of their legitimate business. **At the first sign of control becoming effective legal proceedings should be instituted to test the validity of a law which in respect of its power to interfere** with the **rights and privileges of private business is nothing short of Bolshevistic.**

Even in time of national emergency control of a country's wheat supplies by legislative enactment should only be put into force as an extreme measure for the good of the whole community. Control at any other time is class legislation of the worst kind since its only object can be to increase the wealth of few at the expense of the rest.

Do YOU Read Your Trade Paper?

IT is logical to assume that there are but few business men who regard themselves as modern who would consider that day well spent in which they had not, in order to keep posted on world events, glanced carefully through at least one daily newspaper. Yet a great many, possibly of these same men, will not even take the time to take the wrapper from off their OWN trade paper, or, if they get this far, go through its pages with one-half the attention they pay to absorbing the news of the day.

When a man engaged in trade subscribes to a paper covering his field he has reason to believe that he will get value for his money. He knows that no business is so competitive as journalism, particularly trade journalism. Being aware of these things he must realize that every dollar of the capital invested in the business which is producing his trade paper is working to secure information for himself, for his business, for those employed by him or for those whose capital is invested in his business.

A trade paper that did not succeed in fulfilling its functions from the outset of its career would last but few issues. When a trade paper, however, gives physical evidence in each successive issue of its growing usefulness and indispensability it is proof positive that others in the trade to which it is devoted are finding it of worth and value. The cost of a subscription to most any trade paper is as nothing compared with the cost of producing each copy, but it may safely be said that the dollars and cents value of the ideas and information which may be derived from even one issue of a trade journal far exceeds the amount of the subscription.

No business man can honestly say that he has not time to read his trade paper. He hasn't time not to read it.

Abolish the term "Immigrant"

AT a time such as the present when Canada more than ever needs a greater population for the development of her vast natural resources and, perhaps more important still, the liquidation of her tremendous national debt, would not the abolition of the term "immigrant" be opportune?

No man or woman who comes to this country with the intention of making it his or her future home becomes of course of any less potential value by reason of being called an immigrant, but there is something cheap, poverty-stricken and undignified about the word which savors more of mid-century times when war and famine cursed countries of the Old World drove millions of their nationals to other lands in the smelly steerages of sailing vessels with

all their tangible possessions in a pocket handkerchief.

To-day, the prospective citizen of a new country does not regard his intended new home as a refuge but as an opportunity. He comes as a rule with a well-dressed and comfortable-looking family, with sufficient cash to enable him to live decently until such time as he has found himself an occupation.

Let all of us, new or old citizens of Canada, do all in our power to welcome "New Canadians" as brother citizens.

Prosperous Times Ahead

THE increasing number of Dominion or Provincial incorporations of British industrial concerns in different governmental publications would seem to justify anticipation of a speedy return of the times when a large portion of the surplus capital of the British Isles found an investment outlet in this country. Many conditions are contributing to bring about this desirable state of affairs, chief among which, perhaps, is the improving exchange situation. Should the present position suffer no serious relapse, there is every indication that a dominant interest and faith in the Dominion will bring about a considerable expansion of British investment in Canada, for interest is being evinced by investors in methods of investment and manners of development which previously did not seem to carry any special appeal.

The situation has been for some time that, strictly, there has been no such thing as surplus British capital, while the instability of industrial and other conditions have militated against such crossing the Atlantic in the event of its being available. The situation as it is developing at the present time is merely a resumption of an interest from necessity, long dormant, an awakening to the new dawn of opportunity.

With regard to the future interest in Canada of the great republic to the south there is no reason to believe that United States interest in Canada will decline. Indeed, the tendency would seem to be for this to increase. With, therefore, new capital coming from Great Britain, and vieing with that coming in from across the border, Canada should prosper exceedingly from the business rivalry and experience a period of development surpassing anything she has hitherto known.

A Shortsighted Policy

IT appears to be the accepted practice among many of those charged with the purchasing of supplies for flour mills and elevators that because the firms by which they are employed have never previously done business with certain houses that salesmen representing those firms should not be accorded hearings when they call. Even though a traveller or a salesman may not be carrying a line in which the prospective purchaser is interested, the very fact that such salesman have been courteously received means the creation of a spirit of friendliness which is translated into terms of practical value when that salesman compares notes with his confreres and says a good word for the trade.

Apart from this, however, it would appear to be an excellent policy for mill buyers to see all salesmen. What the representative of a house selling mill or elevator machinery, equipment or supplies has to sell should be found out. It may be the very thing that the buyer or his employer has been looking for. The comparatively short time that is lost in seeing a man who proves to have nothing of interest to sell is more than compensated for by the information gained from those salesmen with whom business is eventually done.

The purchasing agent, who, to use a figure of speech barricades himself against the approaches of salesmen often loses for his house those special considerations which salesmen sometimes have to offer and which are quickly taken advantage of by buyers who thereby reap the reward of their courtesy.

Other Points of View

THE DRUG EVIL

The (Montreal) Gazette.—Some day, perhaps, the principle of the League of Nations will help to internationally control—the only really effective way—the manufacture and the distribution of drugs for their purely legitimate medical purposes. There never was a question so entirely destitute of a second side, and one, the serious consequences of which can scarce be overstated—as the tampering with drugs in any shape or form.

MILLING INDUSTRY RECOVERING

Modern Miller.—During the war the milling industry expanded, then came the reaction and reconstruction. Does it not seem that we are rapidly getting back to a position in the trade that can be called normal?

THOSE NEW NICKELS

Kingston Standard.—As was anticipated, the public do not like the new five-cent nickel coins; they are too much like the quarters. We have even heard that they are being represented in church collections as the latter. This is not really right. The Government should not allow itself to be placed in the position of tempting church-goers to do wrong. Churches are places where people are taught how to fight Old Nick; the New Nickles will interfere with this.

SAFETY FIRST, TOO

Ottawa Journal.—The United States, in spite of its advocacy of disarmament, seems to have a fairly strong determination not to be caught napping if trouble should arise, her war preparedness expense being almost the same as those of Great Britain and Japan combined.

THE DANGERS OF SPORT

Fort William Times-Journal.—There are certain common precautions that should always govern those who go in for canoeing as a sport. The canoe should not be overloaded. No person who cannot swim should be taken as a paddler or a passenger. No fooling or changing of seats in midstream should be permitted. No chances should be taken in rough water, or in the wake of steamers, just "for the fun of having the canoe rock." In the event of an upset, keep cool and remember that the canoe, or even a paddle, if held to without struggling, will keep a person afloat for a long time, unusually plenty long enough for rescuers to save life.

EASTERN PROVINCES

MONTREAL

Dubrule Building
Phillips Square

Tel. Plateau 1983

MONTREAL AUGUST 15TH, 1922

THE MONTREAL MARKETS

Flour.—Although cash and future wheat prices in the Winnipeg market have continued on the downward trend of late there has, as yet, been no official change in prices prevailing, but it is a well known fact in the trade that they are being shaded. There has been no improvement to note in the demand for supplies from any source, the bulk of the orders received being for small lots to meet actual wants, and in consequence the market has been quiet with car lots of first patents quoted at $7.80, second patents at $7.30, and strong bakers at $7.10 per barrel, in jute bags, ex-track, less 10c per barrel for spot cash.

The trade in winter wheat flour is also slow, and the market has been without any special feature to note. The demand at present continues to be limited, owing to the fact that buyers in most cases have ample supplies on hand to meet immediate wants, and they are holding off awaiting further developments in the situation. Prices are unchanged, with car lots of new crop choice grades quoted at $4.90 to $5 per barrel, in second-hand jute bags, ex-track, and winter wheat patents at $5.30 to $5.40 per barrel, in new cotton bags, ex-track. Small lots of old crop choice grades are selling at $6.15 per barrel, in new cotton bags. The demand for white corn flour is moderate and prices are about steady at $4.50 per barrel, delivered to the trade.

Millfeed and Rolled Oats.—A fair amount of business continues to be done in some lines of millfeed, there being a steady demand from country buyers for small lots in mixed car orders and prices for such are unchanged with sales of Manitoba bran at $25.25, shorts at $27.25, and middlings at $29.25 per ton, including bags, less 25c per ton for spot cash.

Grain.—The demand from local and export buyers in the domestic market for cash grain has been slow, and in consequence the volume of business has been small, and the market quiet. The market feeling has been steady, with no change in prices to note. Sales of odd cars of No. 2 Canadian western oats are being made at 58½c to 59c, No. 3 C.W. at 55½c, tough No. 3 C.W. at 52½c, and No. 2 feed at 50c per bushel, ex-store, while American No. 2 yellow corn is selling at 80c per bushel, ex-store, in Canadian funds.

Baled Hay.—There has been no change in the condition of the market for baled hay, prices being steady with a moderate trade passing in small lots of new crop No. 2 timothy at $18 to $20, and in No. 3 timothy at $16 to $18 per ton, while car lots of old crop good No. 2 timothy are quoted at $25, No. 3 timothy at $23, and clover and clover mixed hay at $18 per ton, ex-track.

GRAIN SPACE IN DEMAND

The big demand for space for the shipment of grain from Montreal to the United Kingdom during August and the already considerable bookings that have been made indicate that the shipments of grain from this port in August will be as large, if not larger than they were in July. So far there are engagements for 200 to 250 loads. The demand for continental room has been rather quiet and freight on vessels here sailing to Hamburg was let at 13 cents per 100 lbs.

CANADIAN FLAX TO JAPAN

Yokohama.—The first shipment of Canadian flax seed to reach Japan arrived here recently, and was transhipped by coast steamer to the Kokkaido, where it is being sown by way of experiment by one of the largest growers of flax in Japan. If the results prove satisfactory, there will no doubt be further business in this product. For this reason the following pointers regarding packing may be well advised:—

(1) The shipment referred to arrived in bags of 190 pounds. In future it would be well to not ship flax in heavier than 100-pound bags, or at least not more than 150 pounds. This commodity is all handled by coolie labor, and if the bags are not too heavy it greatly facilitates unloading at this end.

(2) Another important point in connection with the shipment of flax seed from Canada is that double gunny bags should be used instead of single as was the case with the shipment referred to above. Single bags are much more liable to be torn.

INDIA WILL EXPORT WHEAT

Bumper wheat crops in northwest India have resulted in great activity among the freight forwarders and exporters of Karachi, who have been busy in the interior buying up grain for early shipment. One British steamship company has concentrated 25,000 tons of shipping in the Karachi port which is now loading for Europe. The wheat crop for this district is estimated about 15 per cent. above normal.

Toronto.—Word has reached the city of the death in Clarksburg, Ont., of Mr. Walter L. Tyson, who for years was well-known in the Ontario milling and grain trade. The late Mr. Tyson was born at Lloyd Town, seventy-seven years ago, and moved to Clarksburg in 1868, where for many years he owned and operated the Beaver Valley Flour Mills. Latterly he was Clerk of the Division Court.

LESLIE C. BRINE

Grain Trimming and Bagging

TELEPHONE St. Louis 6397F **MONTREAL** TELEPHONE St. Louis 6397F

Correspondence

The following communication which should make clear any confusion or misunderstanding that may exist with regard to those provisions of the Federal Feeding Stuffs Act covering bran, shorts, middlings and feed flour, has been prepared by the Canadian National Millers' Association for the information of its members.

Dear Sir:—

A certain amount of confusion or misunderstanding appears to be evident with respect to the present regulations under the Feeding Stuffs Act, covering bran, shorts, middlings and feed flour.

You were advised direct from the Department of Agriculture by circular dated May 11th, 1922, giving you the new standards as effective May 10th, 1922.

You were again advised direct from the Department under date of May 23rd, and from this office on May 25th, that amendments to these standards were made as the result of representation on the part of the Association. These amendments did away with the specifications regarding size of screens, etc., through which the different millfeeds were to pass.

The chemical analysis now in effect under this Act are as follows:—

	PROTEIN not less than	FAT not less than	FIBRE not more than
Bran	15.0 p. c.	3.5 p. c.	11.5 p. c.
Shorts	16.0 "	5.0 "	8.0 "
Shorts	16.0 "	5.0 "	8.0 "
Middlings .	16.5 "	3.5 "	4.5 "
Feed flour	(not specified)	(not specified)	2.0 "

It is not necessary to register pure feeds with the Department or to show the analysis on the bag or container.

It is necessary under this Act, however, to register bran, shorts, middlings and feed flour which contain any screenings and the guaranteed analysis must be shown on the container. Application forms for registration can be had either from your local inspector, the Department, or this office.

The standards given above apply both to pure feeds or feeds with mill run of screenings.

For wheat by-products containing the mill run of screenings the containers must show the registration number, the guaranteed analysis and also the name, "With mill run of screenings" or "Not exceeding mill run of screenings" the word screenings to be of the same size type as the name of the feed. (See note under section headed "Definitions" in regulations in pursuance of Act.)

Any other information you require please advise this office or write direct to the Department of Agriculture.

We have been requested to urge upon all millers to manufacture pure bran and middlings. While there is nothing in the Act to provide for this, nevertheless the livestock and dairy interests are very anxious and have requested us to co-operate with them in this matter. To this we have agreed and we trust that all members will come into line.

As these standards have been made effective only after a long series of conferences with the Department of Agriculture and the livestock and dairy interests, your Executive Committee urges upon you the necessity of co-operation with the Government in every way possible to make these regulations effective thereby placing on the market a product which is needed. Yours very truly,

F. C. CORNELL.
Secretary.

LACHINE CANAL GRAIN SHIPMENTS

Nearly two million more bushels of grain were shipped down the Lachine Canal in July, 1922, than in the corresponding month of last year. Increases were registered in all varieties except corn, the most outstanding being in wheat, of which 9,707,668 bushels were carried last month, compared with only 2,536,453 bushels in July, 1921, a gain of 7,171,215 bushels for the month. A big drop was recorded, however, in the case of corn, which almost offset the increase in wheat, only 1,312,478 bushels being carried in July, 1922, against 7,313,524 during the same month last year, a decrease of 6,001,046 bushels. Shipments of barley rose from a total of 209,570 bushels in July, 1921, to 592,668 during the month just passed, while rye shipments amounted to 442,530 bushels this year, compared with 296,899 in July of last year. Oats showed a small gain, 919,089 bushels in July, 1922, against 869,737 a year ago, while flaxseed jumped from 48,375 bushels last year to 124,932 in July, 1922. The total amount of grain shipped down the canal during the month was 13,099,365 bushels, against 11,274,558 in July, 1921, an increase of 1,824,807 bushels.

THE CHICAGO MARKETS

The following table compiled from figures furnished by Messrs. Logan & Bryan, members of the Winnipeg Grain Exchange and the Chicago Board of Trade, C.P.R. Telegraph Chambers, Montreal, show highest price levels recorded on Chicago Board of Trade from July 27, 1922 to August 10, 1922, inclusive.

	July 27	July 28	July 29	July 31	Aug. 1	Aug. 2	Aug. 3	Aug. 4	Aug. 5	Aug. 7	Aug. 8	Aug. 9	Aug. 10
July Wheat	1.10½	1.11¾	1.11⅜	1.08¾									
September Wheat	1.08¼	1.09⅝	1.08⅜	1.06¾	1.06⅜	1.07	1.05⅞	1.08¼	1.08¼	1.06⅞	1.06⅜	1.06½	1.06
December Wheat	1.10¼	1.11½	1.10½	1.09	1.08⅜	1.09	1.07⅞	1.09⅝	1.09¼	1.06⅞	1.07⅛	1.06½	1.06⅛
September Corn	0.62½	0.64	0.63¼	0.62	0.62⅛	0.62¾	0.61⅝	0.62¼	0.62	0.61⅜	0.60¾	0.59⅞	0.59½
December Corn	0.58¼	0.60⅜	0.59¼	0.58	0.59⅜	0.62½	0.58⅛	0.58⅜	0.58½	0.57	0.57⅛	0.56	0.55
September Oats	0.34¼	0.35	0.34⅜	0.34	0.33⅜	0.40	0.33⅛	0.33⅝	0.33⅝	0.32⅞	0.32½	0.32⅛	0.31⅞
December Oats	0.37⅛	0.37¾	0.37¼	0.37	0.36⅛	0.33½	0.35¾	0.36¼	0.36⅜	0.35½	0.35⅜	0.35	0.34½
September Barley	0.60	0.57¾	0.57½	0.57¼	0.55	0.56	0.55½	0.56⅛	0.56½	0.55½	0.55½	0.55	0.55
December Barley	0.58½	0.58½	0.58⅜	0.58¼	0.58¼	0.58	0.54	0.54⅞	0.55	0.54½	0.54½	0.54½	0.54½
September Rye	0.78½	0.79⅜	0.78⅜	0.77	0.75	0.73¾	0.73⅛	0.75¼	0.75¾	0.74	0.73¼	0.73	0.73

ONTARIO
TORONTO

TORONTO AUGUST 15TH, 1922

THE TORONTO MARKETS

Flour.—There has been some little business passing in new crop Ontario winter wheat flour, although there is no great demand as yet. Prevailing prices for Ontario winters range from 35s. ($8.05) to 36s. ($8.30), c.i.f. United Kingdom points. There is also a limited enquiry for Manitoba flour and sales have been made at 38s. ($8.30) to 40s. ($8.75). There is little change in the domestic market and buyers are not taking on any stock in quantity. Immediate wants only are being ordered and none of the big consumers are inclined to stock up for any time ahead. Generally speaking, both export and domestic flour markets are somewhat dull.

Millfeeds.—Both bran and shorts are moving steadily, with a good demand for the heavier feeds, and the big mills are selling all they make. Pigs are consuming the heavier feeds for which there is an excellent demand. Just what the future of the market has in store it is hard to say, but it is certain that the market will be affected to some extent by the large quantity of roughage which will be on hand as the result of the excellent crops that are promised, when farmers will have a lot of their own material to feed. So far, despite the good pasturage and the restricted outlet for millfeeds, there has been a fairly steady demand and the market is keeping up well. Bran is quoted at $22 to $24, and shorts at $24 to $26, although the list price of some of the big mills runs a dollar higher than these quotations. White middlings are selling at from $30 to $32 and feed flour at $1.75 to $1.90.

Oil Cake.—Oil cake has been showing a little firmer tendency during the past ten days, with a quotation of $50 a ton at the mill. Probably due to the corn and other green stuff coming in there has been a falling off in demand during the past two or three weeks. Linseed oil is a little easier and is quoted at $1.20 per imperial gallon. There is a fair export demand for the product and dealers say it would be a great deal better if fairer freight rates were obtainable.

Rolled Oats.—The warm weather has caused a falling off in the oat meal and rolled oats trade and comparatively little of these products is being disposed of. Practically no export business is being done in these lines. Rolled oats are quoted at $2.85 to $3.00 per 90-lb. bag.

SEE THAT YOUR HOUSE IS RODDED

Lightning is still one of the most frequent causes of elevator destruction or damage principally because that building is generally the tallest structure in town, and if unrodded offers an ideal point of meeting for the electrical currents in earth and clouds. When rodded with a cable or rod of the right "surface" and correctly grounded, the hazard, according to reliable figures, is almost totally eliminated.

WESTERN MILLING OPINION ON PROBABLE EFFECTS OF CONTROL

Winnipeg.—Dearer flour for the Canadian consumer, reduced sales for the millers, no reduction in the handling of the wheat crop and the introduction of the largest combine in Canada will result from the introduction of the wheat pool according to the opinion of those well acquainted with the situation.

The millers are expecting a very difficult period in front of them as long as the wheat board is in existence, although the Federal legislation under which the board has been made possible contains a clause that makes it impossible for the wheat board to take from them any wheat that they have purchased from the board. They claim that it is a bad thing for the country and even the farmers to prevent anyone from speculating in the wheat crop and to place the entire speculation of the crop into the hands of three men.

They anticipate that although the public will be prevented from speculating in the actual wheat that there will be just as much speculation in the certificates given to farmers, which will permit them to share in the profits of the wheat pool after they have received so much for their wheat.

A Communistic Policy.

They also anticipate that the progressive farmer who is able to sum up the condition of the market, and who owns land, nearer the railway than other farmers for which he has to pay a very much higher rental, will object in time to receiving the same amount for his grain as the one who owns land a considerable distance from the railway. The millers say that this is the worst kind of Russian Communism policy, which will eliminate competition at the expense of the industrious and progressive farmer.

Another point about which the millers entertain a great deal of apprehension is that they will be dependent for their supply of raw material upon one source only, which will probably mean that the price of that raw material will be raised and they will have to put the price of their flour up, which will give their competitors in the United States a great advantage. The millers will be compelled to buy from the wheat board as there will be other market open for them. On the other hand the farmers will not receive any more for their wheat in foreign countries as they will be only able to sell at world prices.

The claim that the wheat crop will be handled cheaper by the wheat board than it is at present by the wheat exporters is considered an extravagant one; in fact many think that the reverse will happen.

What Elevator Man Says.

Mr. W. H. McWilliams, general manager of the Canadian Elevator Company, and a member of the 1919 board, discussing the general situation under which the Saskatchewan proposes to operate the board said: "The conditions under which the Canadian Wheat Board of 1919 was operated successfully do not exist to-day. In the first place the 1919 wheat board had the advantage of a steadily rising market during the whole period of the marketing of the crop it handled. The new board cannot expect to have its operations favored by such great advantage. World conditions do not indicate any drastic declines in wheat values until Russia again enters the field as an exporter, but on the other hand

those who have been in the exporting business during the last two years know how carefully and close is the buying being done by importing countries and also its hand-to-mouth character. Private buyers do not buy in great bulk as in 1919 days but in cargo lots or less.

"In the second place the old board had the co-operation of all branches of the grain trade—interior and terminal elevators, milling interests and shippers. It also had practically absolute control of freights and lake and rail transportation.

"Lastly, it is doubtful if it be possible to re-create a wheatboard with as efficient a membership. The old board had the track smoothed and wheels greased for it. The new board has a rocky road ahead and plenty of snags and entanglements to cope with."

In a pamphlet issued by the Canadian National Millers' Association, a comprehensive summary of which has already appeared in Canadian Milling & Grain Journal, issue of May 1, 1922, pp. 24-25, the wheat board proposals are fully discussed and the following conclusion arrived at:

"That in the opinion of the Canadian National Millers' Association it is utterly impossible to operate the mills of Canada under artificial control, nor will the farmer receive any benefits from the same, and for these reasons we are unalterably opposed to the re-establishment of a Compulsory Canadian Wheat Board."

POLLARD MNFG. CO., LTD., WILL NOT SHOW AT NATIONAL EXHIBITION THIS YEAR

Owing to their being unable to secure satisfactory display space, the Pollard Manufacturing Company, Ltd., of Niagara Falls, have decided not to show their famous Midget Marvel Mill in operation at this year's show. The management of the Exhibition it appears has erected a large building in which to house the Pure Food Show. The site is on the corner of Connaught Road and Lansdowne Street. The building covers the ground space on which the Midget Marvel Mill was shown for many years. The operation of the mill was a source of interest not only to millers attending the show but to visitors generally.

While the Pollard Company will not be represented at the Exhibition it is announced that Mr. E. C. Pixley, secretary of the company, will be glad to meet by appointment anyone interested in the Midget Marvel Mill and to take them to inspect one of the installations in the Toronto district.

Ottawa.—Mr. John S. Martin, one of the best known flour dealers in the Ottawa district, died here recently.

The Modern Sophocles

IF the burden of the day's task is heavy, the weight of wrong-doing may be light.
If the cloud of financial difficulty is dark, the blessing of physical health may be your sunshine.
If you have both poverty and disease to meet, and death close by, there is still the everlasting life on which to set your hope.
If you are denied what the world calls physical beauty, you may still have the attractiveness of mental power.
If you have lost one from the family circle, the closing of it up may bring the rest of you together in nearer blessing and friendship.
If the world seems to be getting worse instead of better, the final victory is God's. And it is the final victory that counts.
If you are disappointed in your ambitions you need not be disappointed in your aims.
If you have sinned and come short of the glory of God, you have not come short of his foregiveness, if you repent.
If life seems full of struggle, it is also full of joy.
Trouble is temporary; happiness is eternal.

NATIONAL RAILWAYS READY FOR CROP

Ottawa.—There is little likelihood of car shortage causing a blockade to hamper the movement of western wheat to market, according to information received by the Department of Railways here. The Canadian National Railways are stated to be in a better position as regards grain cars this fall than they have been at any time in their history. There has been no addition to the number of cars on the system during this year, it was stated, but repair work has been speeded up and cars have been got back into the West in large numbers in readiness for the annual eastward move.

MUST'A BEEN PROHIBITIONISTS

Toronto.—Ontario Government experts have been informed that about 1,000 corn borers that had been placed in a field of corn at the Dominion Government laboratory at Strathroy have all disappeared, the corn being allowed to grow unmolested, so that experiments with the pests have been blocked. None of the corn fields in the neighborhood show any trace of the borers. While entomologists are puzzled by the situation, they state that in all probability a discovery of great importance to the corn industry may result from the experience at the Strathroy laboratory.

DO YOU WANT YOUR NAME

to be listed in the Free Milling Directory of Canadian Flour Mills, managers, superintendents, head and second millers, and engineers.

IF YOU WANT TO BE INCLUDED

We must have your name and other particulars on accompanying form. Kindly fill in and return promptly.

Superintendent .....

Head Miller .....

Second Miller .....

Name of Firm .....

Address .....

Daily Capacity .....

Power Used .....

WESTERN PROVINCES

WINNIPEG

WINNIPEG AUGUST 15TH. 1922

THE WINNIPEG MARKETS

Flour.—The domestic flour market continues dull, although a little more activity has been noticed during the past week, largely due to stocks in the hands of bakers and jobbers having reached a low point. During the month of July cash wheat was selling at a stiff premium over the July future, as stocks of Nos. 1 and 2 Northern were not large, and were in strong hands, principally being held by farmers, who had carried along month after month in expectation of securing $1.50 per bushel or better. These high prices for cash wheat resulted in light buying of flour, a hand to mouth variety, as it was anticipated that with the passing of the July position, an easier tendency would prevail. However, there has been little change in wheat prices, and flour has continued unchanged, as wheat offerings have only been sufficient to take care of the demand coming from exporters and eastern domestic millers.

Competition for export business in Manitoba flour is keen, trade volume continues light, and overseas bids somewhat out-of-line with prices on this side. Some mills are reported to be accepting prices below the value of the flour, based on present wheat prices. The enquiry, however, is not keen as the markets of the United Kingdom appear to be flooded with Australian flour, and the financial conditions on the continent appear to be in a very bad shape. Broadly speaking, the flour business in Western Canada is very much on the quiet side, and not much improvement is looked for until the new crop is being marketed in volume and the trade in general becomes more stabilized.

Prices are unchanged from last report and are quoted as follows: For delivery at points between Fort William and the western boundary of Manitoba, top patent springs, $7.30 bbl., in jute bags; second patents $6.70, and first clears $6.10, in straight or mixed cars, 30 days terms; cotton, 20c over this basis. Saskatchewan and Alberta points are 10c and 20c respectively, under Manitoba, and Pacific Coast points 30c to 50c over. Bakers and other car lot buyers get a special discount on above prices.

Millfeed.—The demand for bran and shorts is only fair, considerably lighter than at last report which is mainly due to the fact that the fight against the grasshoppers is over for this season, and thousands of tons of bran have been used mixed with poison and other ingredients in the hopper infested areas of Saskatchewan and Alberta. Stocks are not large, as many mills throughout the West are closed down, and others only running part time. Quotations are unchanged: Bran in mixed cars with flour is $20 per ton, and shorts $22, in bags, delivered, Winnipeg territory.

Oatmeal.—There is a very limited enquiry for rolled oats and oatmeal. Demand is dull and business is quiet. No change in quotations reported. Good brands of rolled oats are selling at $2.70, in 80-lb. cotton bags, and oatmeal at $3.25, in 98-lb. cotton bags, delivered, Winnipeg territory.

The uncertain outlook to the wheat board situation has caused the markets to be very dull and featureless during the past couple of weeks, trade being hampered and restricted to a very large extent. Business has been of a hand to mouth character, both foreign and domestic buyers showing unwillingness to commit themselves until definite announcement as to trading in the future is made. Price changes have not been large, merely following in sympathy with the trend of values in the American markets.

A large export trade has been going on in the American markets, but the difficulty in moving the grain on account of the strike caused a curtailment in business. At times the only feature to the local market was a fair cash trade, but this was of a very spasmodic nature. Generally speaking, exporters have been good buyers of the top grades of cash wheat, but the lower grades have been very dull.

The Italian wheat crop was estimated at 148 millions against 168 millions last year and 141 millions in 1920. Threshing is now under way in the south central sections of the Canadian west, and should be general in about two weeks. The Saskatchewan Department of Agriculture reports favorable yields in most sections, although heavy damage has been to oats through hot weather in scattered localities.

Oats—Futures have been dull, being largely governed by the action of wheat. During the latter part of the first week in August there was an excellent demand for No. 2 C. W. to fill tonnage contracts and had stocks been available more could have been worked. Very little has been doing in the lower grades.

Barley—Both cash and futures dull and without feature. Prices generally steady with no pressure on either side of the market.

Flax—Canadian crushers have been taking odd cars at current prices, but the lightness of available stocks has been against active trade. For the first time for weeks American traders were showing an interest in this cereal.

Rye—Steady and quiet. Elevator interests report that the new crop rye has been coming into their country stations in fair quantities necessitating hedging in the local market. This is having some effect upon the futures.

Late Foreign News

ITALY.—It is reported that the actual yield of wheat is better than anticipated, but nevertheless it seems that the final out-turn will be little if anything above 20,000,000 quarters, as compared with 24,000,000 quarters last year. The prevailing weather is fine and hot, which is proving very beneficial for maize.

SPAIN.—Unsettled, rainy weather is now being experienced. An average crop of wheat is expected to be harvested this year.

GERMANY.—Warm, rainy weather has been experienced throughout practically the whole country during the past month. The crops, generally, receive favorable mention, and it is apparent that a great improvement has taken place during recent weeks. Rye is a particularly well developed plant.

WINNIPEG BELIEVES VALIDITY OF WHEAT CONTROL WILL BE CONTESTED

Winnipeg grain exchange executive held a conference recently discussing the latest phase of the Wheat Board and possible counter moves. The report that Alberta had adopted the identical Bill passed by the Saskatchewan Legislature makes certain the machinery has been erected for handling this season's crop unless an injunction blocks immediate action or there is some difficulty in reference to raising $75,000,000, the minimum amount under which it is reported the board can function. No decision was proclaimed as to the possible action of the executive. That the validity of the law will be appealed ultimately to the Privy Council, however, has been forecast repeatedly.

But some members forecast the ability of the board to raise the funds to carry on buying at least in time to handle this year's crop as the Manitoba part is already coming into the market.

A vital question of law arises as to contract obligation since millions of wheat have been sold on margin for October delivery. If it is made illegal for the private individual to deal in that grain where do these members of the exchange who are involved on both sides of the market get off?

This is the chief subject of discussion round the exchange. Lawyers insist that no British precedent exists for declaring contracts void except possibly the peril of the nation as in the war. But the exchange firms were nearly ruined by the Government Control Board. They knew, however, the prohibition would be removed when the war was over and held on, most of them losing money. If the new Wheat Board eventually becomes law and works out the exchange members are out of business it is feared since even if they could deal in rye and barley these grains will next be under the supervision of the board, it is believed. Western financial circles are wildly discussing this view.

VANCOUVER'S 1922-3 GRAIN TRADE

Vancouver, B.C.—According to Mr. Lloyd Craig, a prominent grain broker, the movement of wheat through Vancouver will at least equal last year's total. He has just returned from a business trip through Alberta and Manitoba. Chinese and Japanese inquiries have become active during the past ten days, and the first shipments will be in late October or early November.

TRADE OPPORTUNITIES

With a view to assisting the Canadian milling trade in the development of a permanent and profitable export business, "Canadian Milling & Grain Journal" publishes in each issue a selected list of trade opportunities, the investigation of which should prove of value. "Canadian Milling & Grain Journal" is taking special pains to ascertain the reliability of each opportunity presented and will gladly furnish any further information regarding them that may be desired.

THE EDITOR.

No. 274. — Les Comptoirs Wegimont, 21-23 Longue Rue Neuve, Antwerp, Belgium, are desirous of purchasing from Canadian producers large quantities of cattle feed, hay and lucern. The firm is a reliable one and is one of the most important of its kind in Belgium.

No. 275.—Messrs. J. & H. Robinson, Limited, 11-13 Huggins Lane, Queen Victoria Street, London, England, are desirous of getting in touch with a Canadian firm manufacturing paper barrels suitable for use by flour millers.

No. 276.—Mr. W. L. Scott, Belfast, Ireland, wishes to hear from Canadian flour exporters with a view to handling their representation or consignments.

C. P. R. VICE-PRESIDENT IS OPTIMISTIC

Winnipeg.—After three days of active sojourn here, following an inspection trip over the C.P.R. system west to Victoria, Vice-President Grant Hall left for Montreal recently.

In the course of his long trip through the western provinces and back, Mr. Hall met a lot of business people, farmers and financiers. He is possessed of the feeling that there is a good time coming and that the worst has been passed. In all the prairie provinces, and in British Columbia as well, he found there was general confidence that with the harvesting of the 1922 crop there will come better business and relief from some of the difficulties which have been depressing the spirits of many people. There are some areas in all the provinces, Mr. Hall says, where the yield will not be as good as in some years, but on the whole there will be a crop which will give substance to the producer and business for all classes in the community.

THE WESTERN MARKETS

The following report furnished by Messrs. Baird and Botterell, 103 Grain Exchange, Winnipeg, shows daily highest price levels from July 27, 1922 to August 10, 1922, inclusive.

	July 27	July 28	July 29	July 31	Aug. 1	Aug. 2	Aug. 3	Aug. 4	Aug. 5	Aug. 7	Aug. 8	Aug. 9	Aug. 10
July Wheat	1.33¼	1.31	1.31⅜	1.32½									
October Wheat	1.14½	1.15¾	1.14⅜	1.12¾	1.10¾	1.10¾	1.09⅜	1.11⅛	1.11¼		1.09¼	1.09¾	1.07⅞
December Wheat	1.10⅜	1.11⅞	1.10⅝	1.10	1.07½	1.07½	1.06⅛	1.07⅞	1.07⅞		1.05⅜	1.05½	1.04¼
July Flax	2.40¼	2.38½	2.38	2.35½									
October Flax	2.07½	2.08⅝	2.07¾	2.03½	1.96¼	1.95¾	2.00¾	2.01½	2.05½		2.02	1.98¾	1.94½
December Flax	2.04	2.03¾	2.02	2.00	1.91½	1.90	1.97⅝	1.96¾	2.00¼		1.94	1.90¾	1.90
July Rye	0.79⅝	0.81½	0.80	0.78									
October Rye	0.76⅜	0.77⅜	0.76½	0.75¼	0.73⅛	0.71¾	0.71⅜	0.73⅝	0.73¾		0.71⅜	0.71⅛	0.71⅛
December Rye	0.72¼	0.72⅞	0.72	0.72	0.70¼	0.70¼	0.69¾	0.70¾	0.70⅞		0.70	0.69	0.68
July Barley	0.65½	0.64	0.64	0.63¾									
October Barley	0.58⅞	0.57⅝	0.57¼	0.57	0.55⅜	0.55¾	0.55½	0.55⅞	0.56		0.55	0.54¾	0.54
December Barley	0.54	0.54	0.54¼	0.53¼	0.53½	0.53½	0.53⅞	0.53⅝	0.53¾		0.55½	0.52	0.52
July Oats	0.50	0.50¼	0.51	0.51¼									
October Oats	0.45⅛	0.45¼	0.44⅞	0.44½	0.43⅛	0.43	0.42⅜	0.42⅞	0.42⅞		0.42⅛	0.41⅞	0.41
December Oats	0.43	0.43⅛	0.42⅞	0.42⅜	0.41⅜	0.41⅜	0.40⅝	0.41	0.41¼		0.40⅜	0.39⅞	0.39

Civic Holiday — Exchange Closed.

Foreign Flour and Grain News

THE primary causes for the recently weakening tone of the wheat market may be ascribed to lack of foreign orders due to requirements having been filled for the time being and to the uncertainty that exists among the grain trade with regard to the operation of wheat control. Not knowing even whether contracts into which they have already entered will be ever permitted to mature, grain men are generally hesitating to assume obligations which may later be nullified. Pending definite developments as to whether or not the operation of control will be made possible this year continued weakness in the market may doubtless be looked for. During the past few days the export business done has amounted to but a few odd cars of barley and oats. A few scattered bids for wheat from English buyers were so far below current values that no business whatever resulted.

The flour market has been experiencing a period of activity of late, and while the demand from the United Kingdom has been quiet a steady trade is being done with other importing countries. The domestic situation shows room for improvement, a limited demand being due to declining prices and the repeated predictions from official and semi-official sources of a big crop.

Prices show no change from last report, first patents being quoted at $7.30 and strong bakers at $7.10 per barrel in jute bags, ex-track, less 10 cents per barrel for spot cash. Winter wheat flour prices show a decline from last report of approximately a dollar a bbl. for odd cars of choice grades, which are quoted at $4.90 to $5. Patents are also quoted a dollar lower at $5.30 to $5.40 per barrel, in new cotton bags. Choice grades of old winter wheat flour are unchanged at $6.15 per barrel.

RUSSIA.—All conditions indicate that Russia will be able to harvest sufficient food this autumn to suply the needs of the entire country. The great problem is the limited means of transportation. If the Russian Government can handle the food and transport it where it is required, nobody in Russia will be in want next winter.

JUGO-SLAVIA.—Most of the wheat has now been cut, and threshing has commenced. Although no quantitative estimate of the wheat out-turn has yet been issued, the favorable conditions which have prevailed throughout the season justify the anticipation that the crop will be at least 1,000,000 quarters larger than that of 1921. The maize crop continues to receive very favorable mention, the soil having a sufficiency of moisture. Very hot weather is now prevailing.

ROUMANIA.—Latest telegraphic advices state that fine, warm weather favored the harvesting of the early crops. A private estimate places the maize out-turn at 23 million quarters, compared with 12½ million last year and 21 million in 1920. The wheat crop is estimated at 11,500,000 quarters against 9,300,000 quarters harvested last year.

INDIA.—The monsoon has given further heavy rains, but the wet weather has not suited all crops. Maize is reported to have suffered in Bihar and Orissa.

ARGENTINA.—Recent cable advices mention finer and cold weather, which is seasonable. The new wheat and linseed crops receive favorable mention, although linseed shows too rapid growth and would benefit by a spell of frosty weather. Sowing of wheat, although well advanced, is not yet completed. The bad state of camp roads has caused further hindrance to maize deliveries.

GREAT BRITAIN.—With a better demand and a steadier wheat market of late, prices have become firmer, which is a healthier aspect as, for a long time, home milled flour has been too low in price as compared with the cost of wheat and now that home millers have raised their price 1s. per sack during the past month, making it now 46s 6d per 280 lbs. delivered, this price is considered a fair figure if it was only maintained by all sellers, but there are still a few, with a good deal of flour unsold on hand, who show a strong desire to realize their respective stocks and, in doing so, are rather willing to accept rather poor prices. This makes it difficult for those who are trying to raise prices to a profitable basis and, naturally, bakers are resisting any advance that is being asked.

The outstanding feature on trading in home milled flour has been the sales and offers for future delivery, with bakers being offered new wheat flour for September delivery at 35s. ($7.80) to 37s. 6d. ($8.50) per 280 lbs. delivered. Considerable business is being done on this basis, which, of course, is of a speculative character on both sellers' and buyers' sides and millers are freely talking about 40s. wheat, by this they mean 40s ($8.90) per 480 lbs., but so far there is nothing on the horizon to warrant such "bearish" optimism.

AUSTRALIA.—The recent rains have not altogether remedied the detrimental effects of the prolonged drought in New South Wales, but elsewhere the situation is encouraging.

FRANCE.—Dull, cloudy weather has been experienced recently, and the growth of the cereal crops is now some three to four weeks in arrears of a normal season. Harvesting of wheat is progressing in the Southern departments. Cutting of barley and winter oats is progressing rapidly in the early districts. Opinions regarding the probable out-turn of wheat this year are widely at variance. There is some disposition in official and farming circles to place the crop as low as 32,000,000 quarters, with a consequent import requirement of 8 to 10 million quarters. The deterioration to the wheat crop has mainly taken place in the comparatively low producing areas of the South and South Centre, and that in the rich Northern departments the yields will be better than some people have reckoned. The trade press is also optimistic.

MANCHURIA.—The wheat crop is unofficially reported to be in good condition, but no figure of likely exports can be given until October.

The Elevator Operator

ENLARGED RICHARDSON TERMINAL ELEVATOR AT FORT WILLIAM TO HAVE TOTAL CAPACITY OF 3,500,000 BUSHELS

Although ground for the structure was only broken on the 15th of March last it will be seen from the excellent picture of the work which appears herewith that the construction of the new terminal elevator for James Richardson & Sons, Ltd., at Fort William is far advanced. It is anticipated that the new house will be handling its share of the current year's crop by October 1 next. The new increase to the Richardson Company's grain storage facilities means an added capacity of one and a half million bushels, bringing the firm's total capacity at lakes head up to three and a half million bushels. Provision has been made for further extensions to allow of the addition of another one and a half million bushels capacity, making the ultimate capacity of the plant five million bushels.

Richardson Company's New Terminal Elevator, at Fort William, Ont.

The Richardson Company's old 2,000,000 bushel house has been in continuous operation since 1919. It consists of three receiving legs served by twelve track hoppers and three shipping legs, which handle approximately 20,000 bushels each per hour.

There are four cleaning legs, one flax leg, one screenings leg and one dryer leg which is also equipped with 4 No. 9 Monitor cleaners, supplied by the Huntley Manufacturing Company of Tillsonburg, Ont., and Silver Creek, N.Y., and 29 grain separating machines. The conveying belts are all 40 inches wide capable of handling 30,000 bus. each per hour. The Morris dryer has a capacity of 1,000 bus. per hour. The house was built to handle 180 cars a day. The whole plant is enclosed with over 1,700 ft. of concrete dock. It is said that this is one of the fastest handling plants on the continent. Messrs. Barnett & McQueen, Fort William, Ont., are the contractors.

WORK BEING RUSHED TO COMPLETE ADDITION TO PATERSON ELEVATOR "O".

Fort William.—Every effort possible is being made to have the N. M. Paterson Co. one million bushel addition to elevator "O" ready for the handling of a good portion of the 1922 crop.

1,600 piles have been driven, some of them to a great depth, but all of them down to hard pan. The work of pouring concrete has commenced, and will be rushed to completion. Forty-three new bins will be erected, each ninety feet high, of varying capacity. When completed, the total capacity of this elevator will be 1,750,000 bushels. A marine leg will be installed, and a shipping workhouse built.

The new extension is being built on to the east end of the present annex. Mr. J. R. McKenzie is the superintendent of the work, and he has fifty men working there.

The Fegles Construction Company, with head offices in this city, are contractors for the work. In addition to the local work here, the company tendered successfully for two large elevator buildings in the States.

MUCH ACTIVITY IN ELEVATOR CONSTRUCTION AT HEAD OF LAKES

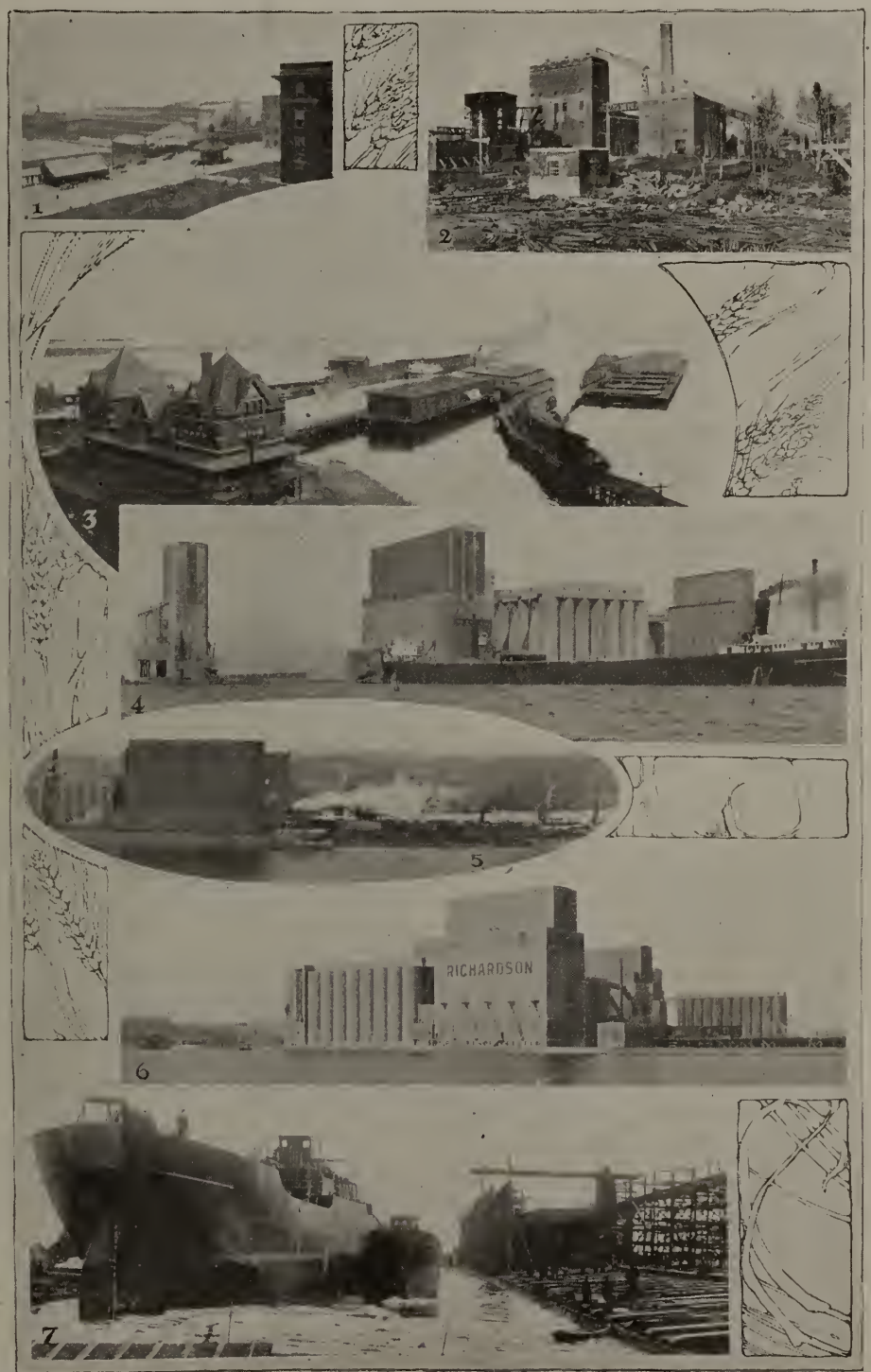
Fort William.—The year 1922 will be a decided marker in the era of progress which is commencing for this district. Not only is advancement manifested in railway activity, but there is considerable development going on along the lines of elevator construction and increased grain storage facilities.

It is a far cry from the year 1883 to the present year of grace, when, thirty-nine years ago the Horn elevator at Port Arthur was built, the eighth wonder of the world, with its capacity of 100,000 bushels, to the condition of things to-day, when, with their combined storage capacity of close to 60,000,000 bushels, Fort William and Port Arthur elevators lead the world in grain storage actualities as well as in rapid grain handling facilities.

North Western Elevator

Not the least factor in this advance will be the plant of the North Western Elevator Company now being added to. S. J. McQueen first built this elevator, on Neebing avenue, three years ago, with wood - working house and thirty-four concrete tanks, capacity of one million bushels. The Sellers interests operated the elevator, in connection with their elevator at Transcona, Man., and the business increased so rapidly that it was found last summer that the elevator was entirely inadequate.

Accordingly, they decided on adding to the plant. Last fall Messrs. Barnett-McQueen obtained the contract to build sixty additional tanks, with a total further capacity of two million bushels, as an annex to the existing plant. The work is to be completed by September 15, and the contract is well within its specified time. The tanks are ninety-five feet six inches high, each tank with a capacity of 28,000 bushels. The concrete work is now practically finished, though there is still a good deal to be done to the working house end of it. Two hundred men have been employed on the building, and Mr. George Murray is the superintendent of construction.



The above cut shows among others, views of several of the terminal elevators at the head of the lakes including those of the Richardson Company, the Canadian Government's elevator and the plant of the Thunder Bay Elevator Co., Ltd. A brief description of the additions being made to the Richardson house appears elsewhere in this issue of Canadian Milling & Grain Journal.

Special Features of Plant

Features of this modern plant are that in the working end there are three 20,000 bushel shipping legs. There are also three 2,000 bushel garners, and under them are three 2,000 bushel shipping scales. Midway up the second row of tanks from the river there is a cleaning floor, on which are eight No. 9 Monitor cleaning separators manufactured by the Huntley Manufacturing Company, Tillsonburg, Ont., and Silver Creek, N. Y. The plant is equipped with a passenger elevator.

The Elevator Operator

The cupola contains special features. In it there are two forty inch reversible belts. The grain is received through the wood-working house, tripped off from the belt to storage No. 2 on to the forty-inch belts, and then disposed through the tanks. In the basement of the building are three 36-inch shipping belts.

When this elevator is completed, it will be the fifth largest storage plant at the head of the lakes.

A new transformer is being built to take care of the electrical wiring for the whole plant.

The Barnett-McQueen company is also busy putting on forty new tanks to the Richardson elevator, Current River, at a cost of $1,500,000. This will also be completed by September 15. The company's construction activities elsewhere include a warehouse for the St. Lawrence Flour Mills at Montreal, and docks for the Imperial Oil Company, at Montreal.

NEW GRAIN ELEVATORS FOR EUROPE

A bill has been introduced into the Sobranje authorizing the Bulgarian Agricultural Bank to contract with an American concern for the construction of the ironwork on a series of elevators of 160,000 tons collective capacity.

A recent bulletin by the French Chamber of Commerce reports the installation of specially designed grain elevators at Dunkirk and the resulting improvement in unloading facilities at that port. The new elevators are capable of discharging grain from vessels into sacks at the rate of 2,000 tons per day, with a great reduction in wastage from the former methods.

CANNOT PICKET GRAIN EXCHANGE

An interim injunction granted recently upon application of counsel for the Dominion Bridge and Iron Works restraining members of the International Structural Steel and Iron Workers from picketing on the new grain exchange building, has been made permanent by Justice Adamson as against the union itself and three individual members. The application was refused in the cases of a dozen other individuals.

Following a wage dispute iron-workers were brought to Winnipeg from Eastern Canada for the grain exchange building. It was alleged on the application for the injunction that by means of intimidation and threats the ironworkers named in the proceedings had sought to persuade these men to quit the job.

"The injunction," said Mr. Justice Adamson, "restrains the defendants from conduct which is unlawful."

WILL LEASE TERMINAL ELEVATORS

Port Arthur.—The Canadian National Railways have called for tenders for the lease of their working elevators "A" and "B," which have a combined capacity of 8,750,000 bushels, for one year commencing September 1, next.

TARIFF FOR PUBLIC TERMINAL ELEVATORS REMAINS UNCHANGED

Winnipeg.—The tariff for public terminal elevators will remain unchanged from last year's figures until September 1, 1923. This decision has been reached by the Dominion Board of Grain Commissioners after a public enquiry. Consideration of tariff charges for public country elevators will be given at a meeting of the commissioners in Winnipeg on August 17.

Mr. Leslie Boyd, chairman, said that in the operation of all public utilities there had been a tendency toward reduced charges. In regard to terminal elevators, however, the sale of screenings as a source of revenue had absolutely fallen away. He was not satisfied that the cost of labor had been reduced to an extent which would justify a reduction in the tariff, and the cost of fuel also might enter into the matter. It was not an opportune time, he thought, to make a reduction.

MONTREAL HARBOR ELEVATORS TO GIVE TWENTY-FOUR HOUR SERVICE

In order to handle with despatch the increased flow of grain that is expected through Montreal in the near future, the Harbor Commissioners have arranged to work the grain elevators as long as may be necessary, and also to place in commission lake carriers to the waiting ocean vessels.

Montreal continues to maintain its position as the greatest grain-shipping port in the world, over sixty-two million bushels having been carried out of the port already this season. Figures supplied by Mr. W. J. Whelan, of the Grain Clearance Board, show that from the opening of navigation to the evening of August 9, a total of 62,378,638 bushels were shipped, compared with 58,946,969 bushels for the same period last year. This increase of nearly three and a half-million bushels over last season's figure is considered particularly satisfactory by the Harbor Commissioners, inasmuch as the total shipments during 1921 amounted to 138,453,980 bushels, nearly fifty million bushels more than were shipped from any other port on the continent.

QUEBEC AND THE CROP MOVEMENT

Montreal.—General T. L. Tremblay, general manager of Quebec Harbor Commission, met the Montreal Harbor Commissioners and a number of grain men recently regarding the diversion to Quebec of any surplus grain shipped to Montreal. While no statement was given out it is understood that the local port authorities and grain men agreed that Montreal will be able to handle with ease all the grain sent to the port this year for trans-shipment to ocean vessels.

Heating of grain in bins is a costly and unnecessary menace to elevator managers and anything which tends to lessen this source of worry and annoyance is worthy of the manager's consideration. Heat determining devices are now being manufactured to show the manager, at his office desk, the exact temperature of the grain in the bins.

Elevator, Mill & Personal Notes

Winnipeg.—Reports are heard on the Grain Exchange that the Saskatchewan Co-operative Elevator Company is preparing to add a milling business to its organization. These reports assert that a large milling company is negotiating with the Co-operative for a combination of interests.

The elevator company usually handles about one-third of all grain sent out of Saskatchewan and is one of the most profitable and strongest in the West. The local agency of the Saskatchewan Co-operative denies knowledge of the negotiations.

Merriton, Ont.—The Lincoln Paper Mills Company, Limited, and the Canadian Pulp Wood Corporation, with offices at Little Cascapedia, Quebec, have amalgamated. A continuous supply of high grade pulpwood is assured, and operations will be carried on as usual at Merritton. The new concern will be known as Lincoln Mills, Limited.

Vermillion, Alta.—The Federal Grain Company has commenced work for the erection of an elevator at Claysmore. The farmers of this locality have been endeavoring to secure an elevator at Claysmore since 1912 and their untiring efforts have at last borne fruit.

Borridaile.—The National Grain Company plans to erect a 35,000 bushel elevator here.

Fort William.—With the completion of the new elevator construction, at present under way, the grain storage capacity at the head of the lakes will exceed that at any other port of the world, with a storage capacity of over 58,000,000 bushels. For many years this honor has been held by either Chicago, or Minneapolis and St. Paul. Storage capacity of the 32 elevators at Fort William-Port Arthur is 58,293,000 bushels.

Galt. — The Galt Flour Mills, Ltd., has been organized with headquarters here. The provisional directors of the firm are: Messrs. T. R. Ferguson, G. R. Sproat, J. C. Thompson, G. H. Donley, H. Ferguson and E. C. Snelgrove. The company will engage in general milling and grain business.

Stamford, Ont.—The Stamford Milling Company, Ltd., has been reorganized and incorporated with a capitalization of $100,000. The company will hereafter operate under the name of the McLeod Milling Co., Ltd.

Vancouver.—The Vancouver Milling & Grain Company, Ltd., has been making some important additions and improvements in its grain cleaning and feed manufacturing department. The equipment was supplied by the J. J. Ross Mill Furnishing Company. Mr. R. B. Hall, the genial and energetic suprintendent of the milling company, evidently believes in keeping abreast of the times.

Duncan, B.C.—The feed mill of the Cowichan Creamery Association is being remodelled and equipped with up-to-date grinding, mixing and cleaning equipment, which is being supplied by the J. J. Ross Mill Furnishing Company.

Mr. C. E. Austin, for several years manager of the Interprovincial Flour Mills Co., Ltd., at Saskatoon, left recently to take over the management of the Maple Leaf Milling Company at Medicine Hat, Alta., and Brandon, Man.

Mr. O. F. Hartman, export and domestic flour broker, E-5 Produce Exchange, New York City, was a recent caller at the Montreal offices of "Canadian Milling & Grain Journal." Mr. Hartman has been calling on the trade in Quebec and Ontario points.

Mr. H. E. Sellers, president of the Northwestern Elevator Co., Ltd., Winnipeg, was a recent visitor in Fort William, Ont. Mr. Sellers believes that this year's crop will be a fine one but he did not expect any repetition of 1915 conditions.

Mr. James Stewart, President of the Maple Leaf Milling Company, was in Toronto recently on his way to Ottawa.

Mr. T. H. Ellis, of Mount Forest, Ont., operator of the elevator in that town for Hay Brothers, of Listowel, was a business visitor in Toronto recently.

Mr. F. L. Green, of Messrs. F. L. Green & Co., grain dealers of Greenwood, Ont., spent a few days in Toronto recently.

Mr. M. A. Pollock, manager of the Canadian Flour Export Company, spent some enjoyable days on a fishing trip in the Kawartha Lakes district recently.

Mr. W. C. Omand, grain dealer, Royal Bank Building, Toronto, returned recently from an outing at his summer cottage on Lake Simcoe.

Brig.-Gen. A. E. Labelle vice-president and managing director of the St. Lawrence Flour Mills Co., Ltd., and president of the Canadian National Millers' Association, with Mr. F. C. Cornell, secretary, attended a board meeting of the directors of the Canadian National Millers' Association, which was held recently in the King Edward Hotel.

Messrs. George B. Saunders and **Archie Bruce,** formerly of the staff of the government elevator at Fort William, Ont., who have spent the past two years in Buenos Aires in charge of an elevator built there by Messrs. Sanday and Company, British grain merchants, have returned to Canada and will remain at the head of the lakes.

Mr. W. A. Hewitt, sales manager of the Maple Leaf Milling Company, Ltd., Dominion Bank Building, Toronto, has tendered his resignation to the management, to take effect as soon as his successor is appointed. No announcement is made as to his future plans at present but with his long experience in the milling business it is expected he will continue in the line with other connections.

Mr. Guy T. Pettigrew, of the McLeod Milling Company, Ltd., Toronto, while in Montreal recently, was introduced on 'Change by Mr. F. C. Cornell, secretary of the Canadian National Millers' Association.

Mr. D. S. Ellis, Toronto, grain broker, with offices at 6 King St. E., has been chosen chairman of the Natural Gas Tribunal. It is understood that the appointment was made at a recent meeting at which were present the two other tribunal members, Mr. Ward, of Chatham, and E. C. Steele, who represent the producers.

THE PRACTICAL MILLER

ERADICATING THE MOTH EVIL

(By a Practical Miller)

Up to the time of the discovery of the heat method, hydrocyanic acid gas fumigation was considered the most effective means for the control of mill insects. Experiments now show, however, that while some mill insects succumb very readily to the hydrocyanic gas, others, including some of the most serious ones, do not yield readily to the treatment. If a mill is infested with Mediterranean flour moth, hydrocyanic acid gas is a very effective treatment. All stages of this insect, including the eggs, if not covered with more than one inch of flour, succumb to the gas. On the other hand, if the mill is infested with the several species of flour beetles and of grain beetles, and with the cadelle, the gas treatment is of little value. In no cases where it is possible to use the heat method does the writer recommend the use of the hydrocyanic acid gas treatment, but since it is effective for Mediterranean flour-moth infestation, and since there are small mills where it may be impossible or impracticable to use the heat method, the hydrocyanic acid gas treatment is then recommended as the best method.

There are necessary for this treatment the sodium cyanide, sulphuric acid (best commercial grade, with specific gravity of not less than 1.83), water, stone jars (four-gallon size), paper sacks (common manila, size number 8 and 10 as may be obtained from the grocer), and vessels for measuring and carrying of the acid and water (one-gallon or two-gallon graniteware cups or pitchers are most convenient; tin vessels must not be used).

Formula for the production of the gas: Sodium cyanide, by weight, 3 pounds, avoirdupois; sulphuric acid, by measure, 4½ pints; water, by measure, 9 pints.

Inside measurement of the length, width and height should be carefully taken to determine accurately the number of cubic feet in each story to be treated, no allowance being made for empty bins or machinery. If the building is well constructed and reasonably tight, the following standard may be followed for mill fumigation: In the basement use one pound of sodium cyanide to every 1,000 cubic feet; on the first floor one pound to every 1,200 cubic feet of space; on the second floor one pound to every 1,300 cubic feet; on the third floor one pound to every 1,500 cubic feet; on the fourth and fifth floors one pound to every 1,600 cubic feet. In case the floors cannot be handled separately, the amount should be increased on the lower floors and lessened on the upper floors, for the gas is light and rises.

Before stopping the mill, close the feed and let the mill run empty. Go over the spouts, the elevator legs, etc., with a spout maul to jar the flour or meal loose so that it will run out. Open the hand holes, slide doors, etc., in the spouts, the elevator legs, the bolters, the purifiers, the rolls, the dust collectors, and the conveyors.

All accumulations of flour or meal should be brushed out or removed from the elevator boots, the conveyors and other places in the machinery where flour has lodged. The entire plant should be cleaned as thoroughly as possible and this material removed and disposed of in such a manner as not to be brought back into the mill.

The building must be as nearly air-tight as possible. Windows may be wedged tight. If they are loose, either paper should be pasted over the cracks, or cotton batting should be inserted in them.

Place danger signs of fumigation on all sides of the mill, and have a watchman guard the mill during fumigation.

Since the insurance companies require a watchman, and since he would not dare to pass through the mill during the fumigation, permission should be had from the insurance companies relative to the watchman clause.

The Process of Fumigation

Measure into each jar the proper amount of water and distribute the jars so as to afford easy access to them in rows upon each floor of the building. Avoid placing them alongside of any belt, sacked material, or anything that might be injured from spattering or leakage from the occasional cracking of a jar.

Measure out the acid and add it to the water in the jars. Always pour the acid into the water.

After the jars have been arranged and the acid added, the cyanide should be broken into small lumps, none of which should be larger than a hen's egg, and made up into three-pound packages in the doubled manila sacks; that is, one sack placed inside the other. The cyanide should be handled with leather gloves, and out in the open air where the operator may avoid inhaling the dust. Care should be taken to avoid any particles flying in the eyes or mouth. It is well to protect the eyes with goggles. A bag containing cyanide should be left at the side of each jar. Before dropping the bags of cyanide into the jars make an inspection of the entire building to see that all windows are closed and everything ready and in its place, so that after the first jar has received the cyanide it will be unnecessary to stop to adjust anything. Begin on the upper floor of the mill at the end opposite the stairway and place a bag of cyanide gently in each jar, passing quickly from one to the other. Pass quickly from one floor to the next one below, closing the trap door, where the process is repeated until the lower floor or basement is reached, where exit is made. The outer doors should be locked and a watchman stationed to guard the building until the fumigation is completed.

Hydrocyanic gas is extremely poisonous, and if the fumes are inhaled, they are almost sure to prove fatal.

Inasmuch as experiments show that below a temperature of from 50 degrees to 60 degrees F. most mill insects are inactive and therefore not affected by the gas, a day should be selected for the fumigation when the temperature is 70 degrees F. or above. Everything should be done during the day so that the charge can be set off in the evening before dark. The building should be allowed to fumigate not less than eighteen hours, and, when

THE PRACTICAL MILLER

time will permit, from twenty-four to thirty-six hours.

After fumigation, open the windows and doors from without for ventilation. Do not enter the mill until it has been aired for at least two hours. After the building has aired one or two hours, the operator should enter to open up the stair doors and more of the windows, but should not remain in the building until it has aired for fifteen or twenty minutes more.

Collect and dispose of the liquid left in the jars. This should be emptied into the sewer or into a pit. Avoid spilling any of the contents of the jars in the mill or on the person. Clean or wash the jars before putting them away. They are easily washed with water. Sweep up the dead insects before resuming work.

CHINESE CONTROL RUSSIAN MILLS

Fifteen or twenty years ago, Harbin in Manchuria was considered certain to be a future great centre of Russian milling. And it is a really great milling centre, but the Chinese control it, instead of the Russians. Since the Russian revolution, a Chinese paper tells us, six of the mills owned by Russians have been bought by Chinese merchants. Only three milling firms in Harbin are now controlled by Russians. Out of 24 firms engaged in the milling business, five concerns are Chinese-Japanese affairs; while the remaining 16 firms are Chinese. Two of these latter are large concerns which have recently come into existence with ample capital. One of them has a mill with 1,800 barrels daily capacity and the other, a capacity of 1,500 barrels per day. The milling outlook is so good in Manchuria that a sack manufacturing company has been formed to make the flour sacks required which have hitherto been imported.

SPOUT PITCH FOR SOFT STOCK

In spouting soft stock it is always well to have plenty of pitch to the spout as shown in Fig. 1. But this is often overdone as softer varieties of stock will "blow" if given an excess amount of

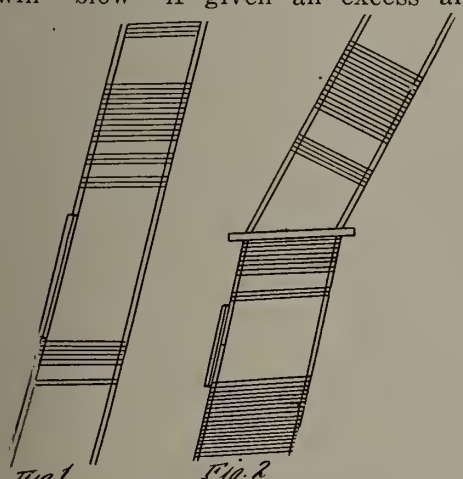


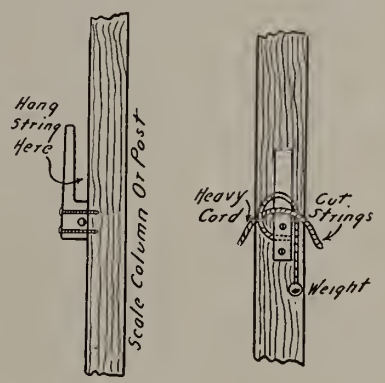
Fig. 1 Fig. 2

pitch. It is more desirable to break the fall, as shown in Fig. 2, as the lid can then be opened for examining the stock without the stock blowing out while the lid is off.

SACK TWINE HOLDER

Here is a wrinkle for holding sack twine that will prove useful in any mill. To make it, take a piece of lumber about 8 inches long, 1½ inches wide and an inch thick; about three inches from one end cut in one-half inch and rip from one-half inch of edge at opposite end to saw kerf made first.

Now bore two screw holes through the end where it is left full width to fasten to scale column or any convenient place. Fasten a heavy cord about 18



inches long with small weight attached to one end of the screw heads or notch piece so as to clamp cord between it and scale column.

Place bunch of cut strings in notch formed, carry cord around back of holder, bring over top of cut strings and let weight hang down in front. You can then pull one string out without pulling the whole bunch out. This exasperating habit of tie strings is entirely stopped.

TESTING FLOURS FOR ODOR

To the average miller, flour in the dust conveys much useful information. As a guide to color and the general working of the mill, the appearance of the flour speaks volumes. The question is often raised as to whether odors in flour can be detected in the dry or in the wet without baking supposing the flour is tainted while milling or after being milled. Of course, much depends upon the particular kind of odor with which the flour is affected. Abnormal odors, regardless of their cause, can usually be detected in the flour without making baking tests. When the flour is warm, the odor can be detected much easier. This means that certain odors can be traced in the actual process of flour manufacture, when the flour is leaving machines and is in a semi-warm state. "Doughing up" the flour with water is helpful in some cases. A good method of examining a flour for odor is to cleanse thoroughly a fruit or preserve jar fitted with a screw top, half fill it with flour, and shake it thoroughly. Remove the cap after a few minutes, and note the odor. If the flour is normal in odor, it is almost certain that the bread will be normal, unless it be contaminated with something other than the flour.

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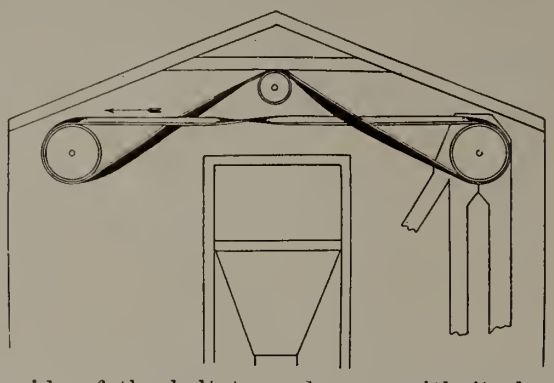
GETTING BELTING OVER OBSTACLES

The accompanying sketch represents a drive from a line shaft to an elevator, when there is an obstacle in the way such as a reel, and is impossible to get a direct drive between the two. In the accompanying diagram the obstacle is one of the old type reels. A rigger pulley has been fixed overhead and the



slack side of the belt turned over, with its back to the face of the rigger. The light or driving side of the belt is twisted between the driver and the driven so that where the belts cross each other the flat sides are presented to each other, thus preventing the belt being thrown off the pulleys.

FLOUR BLEACHING PROCESSES

Speaking on the subject of "Bleaching Processes," at the recent annual convention of the Association of Operative Millers at Kansas City, Mr. A. R. Sasse, chemist, of the Southwestern Milling Co., Kansas City, gave a brief description of the underlying principles of the various processes in use in the United States, starting with the Alsop process employing nitrogen peroxide produced through oxidation of atmospheric nitrogen by the electric arc, and touching in order the following: Nordyke & Marmon application, using nitrogen peroxide prepared by the oxidation of ammonia, the manufacture of which device has been discontinued; Fowler process, employing nitrogen peroxide prepared by the chemical process of delivering nitric acid and water upon a copper plate; the Industrial Appliance Co. application, coming under the chlorine line, using Beta-Chlora, said to be a mixture of chlorine and nitrosyl chloride; the Williams Bleacher, depending upon the electrolytic decomposition of common salt, chlorine being given off at the positive pole and being used as generated; the Fegan & Sasse process consisting of treating the flour in an agitator with chlorine and ammonia simultaneously or by adding chlorine first and then the ammonia; the Agene process, in which chlorine is passed into a solution of ammonium salt and the resulting nitrogen trichloride that is formed is removed from the solution by passing a current of air through it; and the Novadel process employing a solid substance which is mixed with the flour, the chief ingredient of this substance at present being benzoyl peroxide.

History of Flour Bleaching

Dr. F. L. Dunlap, consulting chemist of the Industrial Appliance Co., Chicago, speaking on "Bleaching and Maturing Flour," gave a most comprehensive history of the bleaching and maturing of flour, tracing the endeavors of the pioneer experimenters and following the development of their endeavors to the present time.

As the main conclusions of his discussion, he cited:

1. Any treatment of flour, to condition it for its best baking results, which does not increase the intensity of its acidity, does not condition the flour in the same manner as such flour is conditioned in storage.

2. The proper control of the intensity of the acidity of flour, such as may be accomplished through treatment with chlorine, or any other means which accomplished the same results, effects favorably those factors which are essential to the baking efficiency of flour.

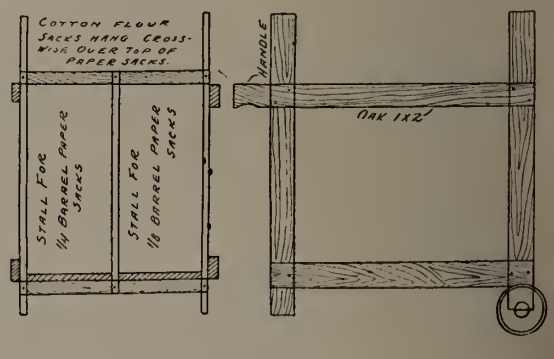
3. The intensity of acidity is that factor which under proper control, favorably affects the dough viscosity by reducing it towards its minimum and, at the same time produces those changes which increase the elasticity of the gluten. It lessens the period of fermentation by increasing the activity of the yeast. It also acts favorably in the control of "rope."

4. Flour which has been subjected to the chlorine treatment is stabilized in the sense that its improved baking capacity remains constant for many months. This stabilizing is brought about by arresting those enzymes to which is due the increase in acidity of an untreated flour when stored.

5. The acidity of flour is its most important variable. Hence the treating of flour with chlorine and the consequent production of the optimum intensity of acidity, is at once a great asset to the miller as it is to those who use his output, and that means each and every one.

A USEFUL PACKER TRUCK

The packer will find this serving truck a handy thing to have around. The posts are 1 x 3 inches and three feet long; other strips are 1 x 2 inches. The truck is 24 inches wide and 30 inches long, with bottom boards made from half-inch stuff. Paper


COTTON FLOUR SACKS HANG CROSS-WISE OVER TOP OF PAPER SACKS.
HANDLE
OAK 1X2
STALL FOR ½ BARREL PAPER SACKS
STALL FOR ½ BARREL PAPER SACKS

flour sacks are placed in truck edgewise with bottom end in front handy to grab; cotton sacks hang across top of truck and do not interfere with the paper sacks. The wheels are taken from under an old portable scale, and the axle with them.

THE PRACTICAL MILLER

FLOATING DUST IN THE MILL

It is an easy matter to say that if floating dust is present in large enough volume in the mill so that discoloration of flour will result via the purifier, there is something wrong with the mill. Such matters are easily overcome if the miller is as good as he should be or thinks he is.

The man who makes this kind of remark at once convinces one that his experience in real dirty mills has been very limited; that he has not been employed by a mill owner with whom it was impossible to reason and that his experience has not been of the kind that would settle for all time the question of discoloring flour by floating dust in the mill.

It may be said that practical millers all have about the same experience in their milling careers. Let us describe a 150-barrel mill which was built, so it would seem, with a view to scattering dust all over the mill on every floor, and to do such a perfect job of it that it would be out of the question to improve on dust distribution.

Dust Scattered on Floor.

First, all grain was handled in the mill and stored in the mill. The main elevator was so placed that escaping dust through the open joints scattered on every floor. Why the open joints? Why was the elevator head so built that in discharging a large portion of the grain was dumped down the back leg? Why was it necessary to so build a mill that not only the main wheat elevator would discharge down the back leg but the feed elevators also?

The distance between the head and boot pulleys was over 70 feet, so it is plain that grain dropping down an elevator leg that distance would create dust, the legging would wear out, and then some more dust. Ground feed was elevated to the roof, then shot down, straight down about 60 feet to the sack. Does any mill operator think that this would raise dust? Everyone in the mill seemed to think that the more dust and dirt they raised the better.

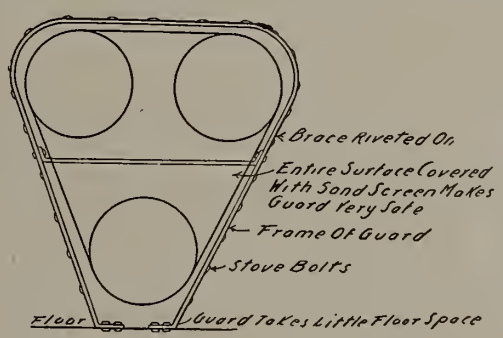
The bran bin had a door about three feet from the floor through which the men would crawl when they found it necessary to scoop bran into the hopper over the packer. This happened very often, since the bran was not packed on the stream.

The wheat scourings were sent to bran bin, and when this bran was stirred or handled with scoop there was an awful cloud of dust, the door was always left open and in a few moments the entire roller floor was covered with scouring dust, so thick that you could not see the floor. It would be so thick on the machinery that you would think that the machines had not been brushed for weeks. To appeal to the help in this matter and ask that they close the door and keep the dust off the grinding flour was met with: "What do you take me for; do you think that I am going into that bin with the door shut?" To see the management about this and other sources of needless dirt did no good. All the satisfaction there was in an appeal to the boss was that they didn't have time for that kind of work now, and that it had always been that way, etc.

When a man blames the miller for the dust and dirt of the average mill, he simply shows his ignorance concerning conditions as they exist in many places. First, the mills are not built right. Second, no one but the miller cares about the dirt—the more the better. Third, since it is the firm's duty to do the sweeping and cleaning, why should any one care? The miller should be competent to remedy the places where the dust is escaping needlessly; this is admitted; but where are the material and time to come from? Is the miller to furnish the material out of his ample salary?

AN EASILY MADE ROLL-GUARD

A roll guard which is neat appearing, very safe, and handy to get around can be made by taking one inch strap iron and bending to shape desired. It should also be braced with the same material, then covered with sand screen which is fastened to the


Brace Riveted On
Entire Surface Covered With Sand Screen Makes Guard Very Safe
Frame Of Guard
Stove Bolts
Floor
Guard Takes Little Floor Space

strap iron with stove bolts. This frame should be braced by fastening the top to the roll. Where a bag truck is used for trucking around the roll which is equipped with guard, the frame should be kept as close together at bottom as possible to give more trucking room.

WHO SAYS FLOUR MILLING DOESN'T PAY!

Until recently Frank L. Shaw, proprietor of a flour mill at Gallipolis, Ohio, was a man in very ordinary circumstances. Now he is worth $40,000 and is wondering what he is going to do with it.

Gold coins, which had lain hidden from the world for sixty-five years, were brought to light when carpenters remodeling the old Shaw homestead found the money hidden between partitions.

NEW ZEALAND GRAIN CROP

New Zealand's actual threshings up to May 20, 1922, indicate a total of 6,170,560 bushels of wheat and 3,213,041 bushels of oats for New Zealand. The average yields per acre are 30.78 bushels for wheat and 40.77 for oats. The Wellington district runs high on the wheat yield per acre, averaging 37.07 bushels, while 53.16 bushels of oats was the average yield of the Southland district.

Montreal.—Fire which broke out in the kiln of the cooperage department of the Dominion Flour Mills, Limited, St. Ambroise St., recently caused damage which has been estimated by Mr. W. B. Wood, the president of the company, at $25,000.

THE PRACTICAL MILLER

CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

ENERGETIC and thoroughly competent mill and sales manager, now in charge of 200-barrel mill in Western Canada, seeks responsible position with live Canadian milling company. Ten years road and sales experience with large Canadian mill. References furnished. Reply Box 120, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

SALESMAN AVAILABLE for the Province of Quebec. Excellent connections in Quebec City and district. Has had several years experience and has represented several leading firms. Can furnish best of references. Reply Box 114, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED — By Head Miller, with 20 years practical experience in modern Canadian mills up to 4,000 barrels capacity. Can guarantee best results as to quality and yield on both hard and soft wheat, and maintain mill at highest point of efficiency. At present in charge of a 1,000 barrel plant. Reply Box 85, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

PRACTICAL MILLER with 23 years experience seeks position with plant having daily capacity of 250 barrels or upwards. Can furnish excellent references. Reply Box 82, Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

MILL FOR SALE

SEVENTY-FIVE barrel roller mill, modern machinery, separate elevator capacity 20,000 bushels. Flour warehouse, 60 tons capacity. Equipped with Chopper, Corn Sheller, and Oat Crusher. Electric Power. Reply Box 121, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—One 50-barrel Greey flour mill, 4 stand, 9 x 19 Rolls. Plansifter, cleaners, scourers, elevators, etc., all of which are in good condition. To be moved from building they now occupy. Reply Box 123, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANT TO BUY a complete grain elevator, with belting and cups. State size and particulars. Box 49, "Canadian Milling & Grain Journal," Dubrule Bldg., Phillips Square, Montreal.

RYE FLOUR WANTED — State approximately quantity could ship regularly. Box 118, "Canadian Milling & Grain Journal," Dubrule Bldg., Phillips Square, Montreal.

LEADING BRITISH IMPORTERS OF CANADIAN FLOUR AND GRAIN

D. T. RUSSELL & BAIRD
Limited

FLOUR, OATMEAL
— CEREALS —
PRODUCE & FEED

Head Office - 73 Robertson St., Glasgow
Also at London, Leith, Dublin
Cable Address: "Delight", Glasgow

W. M. READ & CO.

IMPORTERS OF FLOUR

30 Mark Lane
LONDON, E. C. 3

Cable Address: "THANEHOOD"

Mardorf Peach & Co.

- FLOUR - IMPORTERS

London - - England

SIDNEY SMITH
IMPORTER

Flour, Grain, Feed, Oatmeal and all Cereal products

47 GREAT TOWER ST.
LONDON (ENG.)

Cables: "Trontopri, London"
Codes: Riverside, Bentley, Baltimore, A B 5 & 6 editions and Western Union new 5 letter code.

WM. GILCHRIST & COMPANY

:: FLOUR ::
IMPORTERS

93 Hope Street, GLASGOW

Cable Address: "EGMONT"

Archibald Hamilton William T. Scott

Bruce & Wilson

:: FLOUR ::
IMPORTERS

70 Wellington Street - GLASGOW
CABLE ADDRESS "CALYPSO"

THE PRACTICAL MILLER

WATER POWER FOR SALE.—One thousand horsepower on three leading Canadian railways and Great Lakes waterway. Less than 5 per h.p. per year. Elevator close. Town of five thousand population. Situated in Old Ontario. Reply Box 111, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

POSITION WANTED as head miller in a small or medium sized mill. Applicant has had twenty years' experience. Thirty-seven years of age. Reply Box 110, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED—Experienced miller, to take charge of mill in Western Canada. Give age, experience and references. Reply Box 122, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

WANTED immediately. Flour salesman for Eastern and Western Ontario. Will give liberal terms to right man, who must be able to secure quantity distribution with good record. Reply direct to the James Goldie Company, Ltd., Guelph, Ont.

FOR SALE — Flour mill machinery. Practical enough to fully equip small mill. All modern and in good shape. Attractive price. Reply Box 116-6, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

SALESMAN, with first-class knowledge of flour and feed trade in the Maritime Provinces is available for engagement. Results guaranteed. Excellent references. Reply Box 113, "Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

SALES EXECUTIVE,

Several years experience as principal in Ontario and western grain business, also feed manufacture and distribution; thorough knowledge of French; conversant with grades, options, premiums, hedges, freights and carrying charges. Wants to connect with first-class grain or milling concern. Reply Box No. 115, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Miller, thirty-seven years of age, is open to take charge of small or medium-sized mill, or to take position as second miller in large plant. Has had twenty years experience. Thoroughly familiar with all branches of milling. Can furnish excellent references. Reply Box 107, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

LEADING CANADIAN GRAIN, FLOUR AND FEED BROKERS AND COMMISSION DEALERS

Continuous Grain Quotations Received

CHICAGO WINNIPEG

LOGAN & BRYAN

Members Chicago Board of Trade

MONTREAL TORONTO

Extensive Private Telegraph Wire Connections

C. R. Vannatter Co.
LIMITED

SHIPPERS, DEALERS, EXPORTERS

We specialize in Western Oats, American Corn and Millfeeds of all kinds.

619 DOMINION BANK BUILDING
TORONTO

Phones Adel. 6840-6841

Phones { Office: Adelaide 3113 / Residence: Coll. 3184

T. F. HARCOURT

Grain & Commission Merchant

Dealer in all kinds of Western Canada and Ontario Grains and Mill Feeds also American Corn and Milling Wheat.

Private wires to all leading Canadian and American Markets.

ROYAL BANK BUILDING
TORONTO

Grain and Hay Merchant
MONTREAL

W. J. Hushion

1195 St. James St. Tel. Up. 7572

DAVID MAHAFFY

FLOUR AND MILL FEED

Wholesale

B 6 Board of Trade Bldg.
MONTREAL

THE PRACTICAL MILLER

The Question Box

With a view to making this department one of real service, "Canadian Milling & Grain Journal" cordially invites its readers to send in their problems to The Question Box. There are but very few millers or elevator operators who do not have worries in the proper conduct of their plants. It may be due to lack of experience or inability to trace cause and effect. The logical and sensible thing to do is to ask someone who may possibly know. Often he is not at hand, and still oftener the perplexed miller or elevator operator does not want to show his lack of knowledge. Under these circumstances he can address his inquiry to the craft through this journal. His name will not be divulged if he wishes to remain incognito. Someone is sure to reply who has had similar problems to meet or similar questions to ask. We guarantee to devote all the space necessary to the asking and answering of questions, so do not be backward in sending them in. THE EDITOR.

QUESTION—Of what does the general construction of centrifugals consist?—B. D.

ANSWER—The centrifugal is a slowing, revolving cylinder covered with silk and/or grit gauze or wire inside of which is fixed beaters revolving up to 240 r.p.m. These beaters are either of brush, blade or finger type; the first two have a spiral to divert the stock to the tail, whereas the finger type are set parallel to the shaft and a twist is given to each alternate finger according to the class of stock to be dressed. The cylinder is now made many sided, the ends of which are solid to within six inches of the centre where the ends turn outward and fit into a sleeve, through which runs the main driving shaft. A short worm is fitted on to the head end of this shaft and runs in a cast iron chamber. Into this chamber the stock is fed, is carried by the form into the cylinder, then falling is caught by the beaters and forced to the cover; gradually the large particles are diverted to the tail and either come out in the cut off, leaving only the largest pieces to tail over, or, if not cut off all tail over either being carried out by a worm or drop outside by a spout. The throughs fall into the worm conveyor beneath; a spiral brush keeps the cover clean. The cylinders are from 16 to 30 inches diameter and from 1½ to 3 sheets long. This machine takes a lot of power against the plansifter in spite of new ball bearings, and four machines take as much space as a plansifter. Speeds are vital; a 2½ sheet 24 inch centrifugal cylinder should do about 30 r.p.m., and the beaters 240 r.p.m. travelling in the same direction. Care must be exercised in use of centrifugals in examining the flour to see if any holes are made or greys being dressed.

HERE'S AN OPPORTUNITY

We draw attention to a flour mill which is in the market, sale of which is advertised in our Classified columns. (See page 32). This mill has been successfully operated for past 30 years, and is being sold only on account of the death of the late owner.

The Duster

Mrs. Brown: "I hear the vicar thinks your daughter has a real genius for reciting, Mrs. Smith."

Mrs Smith: "Yes. All she wants, he says to me, is a course of electrocution, just to finish her off like."

TODAY'S BEST STORY

Toronto.—The old boys and the young boys now have their favorite cosmetics. They have learned the secret of the ages. Did man powder, paint and rouge ten years ago? The answer is an emphatic "no". But today? The answer is just as emphatic an "yes".

Men are now demanding everything from the stores which deal in cosmetics which we once thought sacred to women and the stage, the Toronto Star claims. Men now have their favorite powders, their particular hair oils and their delicate perfumes.

Further, some of Toronto "beauty parlors" are now specializing in giving men neat marcel waves, "that natural curl."

Girls in a number of Toronto stores handling powders and perfumes state that the men are more fussy and exacting in their wants than women.

Rufus Redd Dogg

"Et seems t' me," exclaimed Rufus dropping into one of his philosophical moods recently, "thet sum o' these drummers ez cum eround hev a kink 'n ther sense o' humor. T'other arternoon sum uv us wuz hevin' a little neighbourly speil down t' th' corner when a feller with a grip happened along just ez Dibby Hilton wuz hevin' wan o' ris wheezin' spells. Serious-like th' noo-comer he sez, sez he t' Dibby, "d'ye want t' git rid o' thet astamatic trouble Ol' Timer?' 'Sufferin' mackerel,' I'd raythor see gin a dollar 'n ounce then hold on t' it anny longer.' 'Well,' th' traveller feller sez he, 'I wuz readin' 'n a book t'other day thet a Frenchy fella named Flam Marion who hed th' same ez you hev went up 'n a baloon wan day an' when he kem down his wheezin' wuz all gone." "Ez thet so," wheezed Dubby.

"It's th' truth," sez th' drummer," all yez hev t' do t' git rid o' y'r trubbles is t' git up 'n th' clouds where th' air is good." "Yes, I guess," wheezed Dibby in a drier tone then we've heerd f'r manny a day "thet folks ez go up t' th' clouds git rids o' most o' ther trubbles, wheezin' an' otherwise," 'n th' haw-haw thet th' drummer got wuz ez good ez th' wan Steeny Toper got when he wuz asked how much his corn patch 'd run this year 'n he sez " 'Bout fifteen quarts t' th' acre."

Vulcan Grain Elevator Machinery

HAS STOOD THE TEST

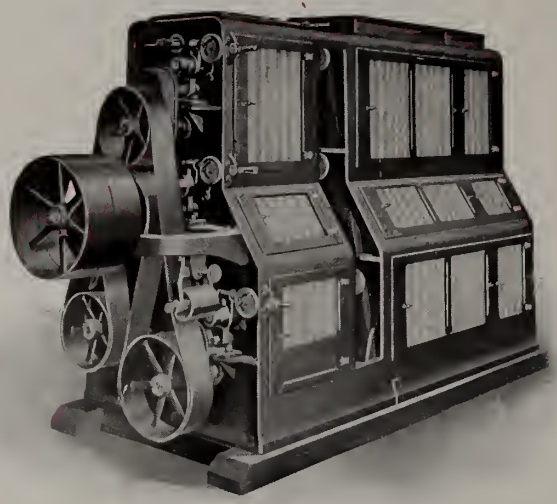
The VULCAN IRON WORKS, Limited

ESTABLISHED 1874

WINNIPEG

MIDGET MARVEL MILLS

Saves Half the Power Bill



Increase Profits by Cutting Expenses

THE MIDGET MARVEL saves half the power bill. (It is quite generally admitted the MARVEL requires only half the usual amount of power.)

THE MIDGET MARVEL being self contained practically all machinery is on one floor under the eye of the operator. (No running up and down stairs.)

THE MIDGET MARVEL will doubtless permit you to run to full capacity even though your water power is insufficient for your present system.

However, the advantages of POWER, SPACE, and SUPERVISION are by no means all - - - - we recently sold one of our larger units to a miller with ample room and water power to run the numerous double stands of rolls with which his mill was already equipped. He found THE MIDGET MARVEL so efficient and satisfactory that he has no use for his other machinery.

Pollard Manufacturing Co., Limited

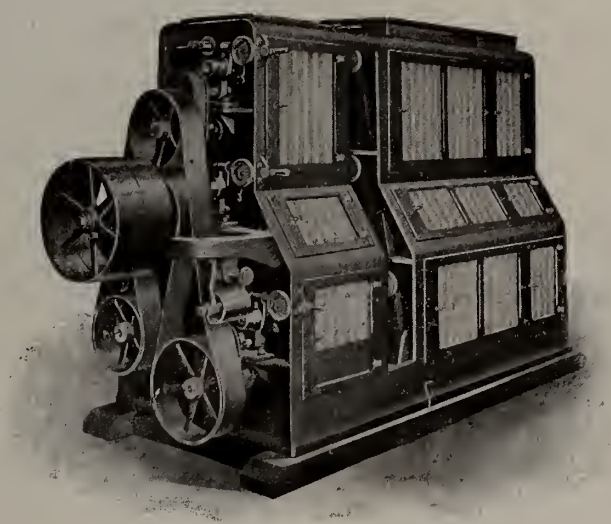
NIAGARA FALLS, ONT.

Western Office: 1206 Union Trust Building, Winnipeg, Man.

CANADIAN
Milling & Grain
JOURNAL

VOL. III MONTREAL, SEPTEMBER 1st, 1922 No. 15

MIDGET
MARVEL
MILLS



The Mill with which to secure results. Makes a Flour of superior quality. Combines the efficiency of the very largest Mills with the small capacity required for local business.

Pollard Manufacturing Co., Limited

NIAGARA FALLS, ONTARIO

Western Office: 1206 Union Trust Building, Winnipeg, Man.

CANADA CEMENT
CONCRETE
FOR PERMANENCE

View of Peerless Cereal Mills Ltd. Woodstock, Ont.

CONCRETE

Keeps the grain dry—therefore

The Proper Material for Elevators

THE conservation of grain demands that it shall always be kept dry. One of the advantages of Concrete that its users first discovered was its wonderful waterproof quality—a quality which ensures the "dryness" of any article stored in a reinforced concrete structure. It is largely due to this that grain elevators of Concrete were erected in all parts of Canada; until to-day we have a series of these huge structures extending from the Western prairies which grow the golden grain, to the Eastern terminals where the grain is kept ready for export.

There are other features of Concrete almost equally important to the grain business. It is fireproof, and rat proof. Moreover, it readily adapts itself to the various types of tank and elevator most suited to the local conditions—is readily moulded to the shape and proportion its designer desires for the particular purpose for which the structure in intended.

SPECIFY
CANADA CEMENT
Uniformly Reliable

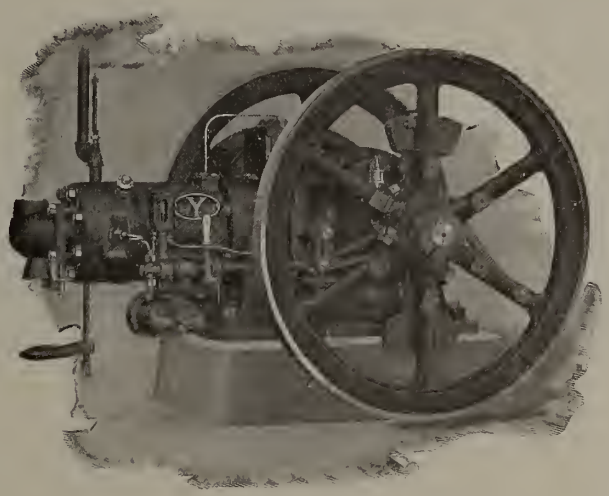
Our Service Department is anxious to co-operate in all lines of work for which Concrete is adapted. Our library is at your disposal at all times without charge.

CANADA CEMENT COMPANY LIMITED

Canada Cement Company Building Phillips Square Montreal

Sales Offices at : MONTREAL TORONTO WINNIPEG CALGARY

Fairbanks-Morse Type "Y" Oil Engines



Cheap Power for Every Mill

Fairbanks-Morse Type "Y" Oil Engines, in Mills and Elevators, show a big saving over electricity or steam. Water power is their only competitor.

Many millers have recognized the increased savings brought about by the reliability of Fairbanks-Morse Type "Y" Engines. Coupled with the lower cost of fuel and operation, these Engines avoid the wastage of partially burned coal, removal of ashes, leaks in boilers and steam pipes, etc.

The "Y" Engine is made in both horizontal and vertical types, in sizes from 10 to 300 H.P. in single units. Write for catalog and any special information you require.

TEAR OUT AND MAIL NOW

The Canadian Fairbanks-Morse Co. Limited, (NEAREST BRANCH)

Without any obligation on my part, please let me know how Type "Y" Engines lower power costs in the milling and grain business.

Name .....

Address .....

.....

The Canadian Fairbanks-Morse Co. Limited

Canada's Departmental House for Mechanical Goods

84-98 St. Antoine St. - MONTREAL

St. John, Quebec, Montreal, Ottawa, Toronto, Hamilton, Windsor, St. Catharines, Fort William, Winnipeg, Regina, Saskatoon, Calgary, Edmonton, Vancouver, Victoria

Established 1854 Cable Address: HUNTMILL

Capacity 1200 barrels daily

HUNT BROTHERS
LIMITED

Head Office and Mills

LONDON CANADA

MILLERS OF

Manitoba Spring Wheat Flour
Ontario Winter Wheat Flour

Hunt's Flour "Becomes a Habit"

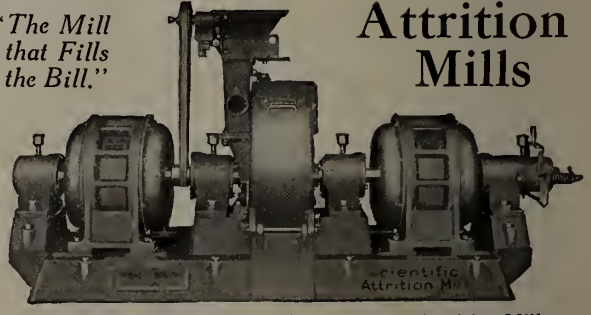
The Bauer
COSTS LESS PER HOUR

Belt or Motor Driven

Ball-Bearing Heavy Duty

"The Mill that Fills the Bill."

Attrition Mills



The Bauer Ball-Bearing Motor-Driven Attrition Mill

Bauer Attrition Mills are made by Attrition Mill Specialists who have made a life-time study and world-recognised success in building Attrition Mills that increase the output, decrease milling costs and put the Grinding Business in the profit-making class. The Bauer Engineering Department is at your service without cost to you. Let Bauer solve your Grinding Problems.

Send for Catalog and List of Canadian Users

THE BAUER BROS. CO.

544 Bauer Bldg., Springfield, Ohio, U.S.A.

Makers of Bauer Attrition Mills, Corn Crackers, Cake Breakers, Centrifugal Reels, etc.

Can You Afford to Risk it?

We refer to that piece of iron that at times comes along in the grain and passes to your rolls.

We hardly think that you think that you can. It might happen several times with no more damage than a gouge in your rolls but the time comes when it is a real menace and the spark coming from the contact may burn your plant.

It's easy to avoid. A MONITOR Magnetic Separator, at a nominal cost, stops the iron as it comes along and automatically removes it to one side, depositing it in a box.

Why take a chance? The knowledge that it is there on guard is worth its cost.

The Monitor
REGISTERED TRADE-MARK

HUNTLEY MFG. CO.

Tillsonburg, Ontario, Canada

Special Northwestern Agents:
KIPP KELLY, LTD.,
Winnipeg, Manitoba.

Representative:
MR. WILL HILL,
404 McArthur Building,
Winnipeg, Manitoba.

Accurate Cut Gears

Write for Quotations

Hamilton Gear & Machine Co.
76 Van Horne St. - TORONTO

?

ARE your Flour Bags made in Canada? Canadian Flour should be packed in Canadian Containers. Have you seen the Lincoln Improved Flour Sacks? If not, we will gladly send you samples.

All Rope Flour Sacks
Cream, White Coated and Blue Lined

Car Lining Paper

Samples and Prices gladly sent on request

LINCOLN MILLS, LIMITED
MERRITTON, ONT.
Sales Office, 43 King St. West, Toronto

THE XXth CENTURY FLOUR MILL

is equipped with

29 Self-Aligning Ball Bearings

UNIT flour mills equipped with plain bearings consume a surprising amount of power to overcome friction. This energy is not only lost, but is the source of a host of troubles which impair the efficiency of the mill.

The twenty-nine SKF marked self-aligning ball-bearings used in the above unit mill save most of this wasted power. They prevent heating, sticking and binding which often result from the use of plain bearings—at the same time they eliminate the wear which would cause rolls to get out of tram and necessitate readjustment. They also eliminate lateral or advance roll motion by slackness through worn bearings, thus giving an unvariable, rigid position to the roll.

We would be very glad to send you additional information regarding operation of the XXth Century Mill.

CANADIAN ALLIS-CHALMERS LIMITED

Head Office - TORONTO

Branch Offices; HALIFAX, SYDNEY, ST. JOHN, MONTREAL, QUEBEC, OTTAWA, HAMILTON, LONDON, WINDSOR, COBALT, SOUTH PORCUPINE, WINNIPEG, CALGARY, EDMONTON, VANCOUVER, NELSON, AND VICTORIA

LAKE OF THE WOODS MILLING CO., LIMITED,

MAKERS OF

MANITOBA SPRING WHEAT FLOUR

GUARANTEED

NOT BLEACHED *NOT BLENDED*

MILLS AT KEEWATIN, PORTAGE LA PRAIRIE, MEDICINE HAT

CAPACITY 13,700 BARRELS DAILY

HEAD OFFICE, MONTREAL WESTERN OFFICE, WINNIPEG

LOCAL OFFICES:—
TORONTO, OTTAWA, LONDON, ST. JOHN, FORT WILLIAM, CALGARY, EDMONTON, VANCOUVER

CABLE ADDRESS:—"HASTINGS," MONTREAL. CODES:—A. B. C. 4th & 5th EDITIONS, 1901, RIVERSIDE

112 RECEIVING ELEVATORS IN MANITOBA, SASKATCHEWAN AND ALBERTA, CAPACITY 3,500,000 BUSHELS.
TERMINAL ELEVATORS AT MILLS, CAPACITY 1,500,000 BUSHELS

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TANCREDE BIENVENU

Western Canada Flour Mills Company
LIMITED

HEAD OFFICE - TORONTO, ONT. N. Y. OFFICE - ROOM 1001. 44 WHITEHALL ST. NEW YORK
CABLE ADDRESS:—"LAKHURON"

MILLERS OF SELECTED HARD SPRING WHEAT FLOURS

Brands:—"PURITY" "THREE STARS" "BATTLE" "MAITLAND"

WINNIPEG MILL

Daily capacity 10,000 bbls. Flour.
" " 1,000 bbls. Rolled Oats.

100 Interior Elevators Throughout Canada's Famous Wheat Belt

The Reason Why!

THE MORSE ROCKER JOINT

Morse Silent Chain Drives

Operate in practically all Grain Elevators and Flour Mills in Canada is because of their Frictionless Rocker Joints. Oil Baths not necessary.

Immediate deliveries.

Write for Catalogue.

Jones & Glassco, *Reg.*

St. Nicholas Bldg.
MONTREAL
Bk. of Hamilton Bl'g.
TORONTO

BAGS

JUTE AND COTTON BAGS, HESSIANS BURLAPS, BUCKRAMS, PADDINGS, TWINES, ETC.

The CANADIAN BAG Co., Limited

HEAD OFFICE:

427 St. Patrick Street, Montreal

BRANCHES:

TORONTO - WINNIPEG - VANCOUVER

BY SPECIAL APPOINTMENT
TO HIS MAJESTY THE KING

THE OGILVIE FLOUR MILLS CO.

LIMITED

HEAD OFFICE: MONTREAL, CANADA

THE Company which has made Canadian Flour renowned throughout the world with its most famous brands:—

ROYAL HOUSEHOLD

and

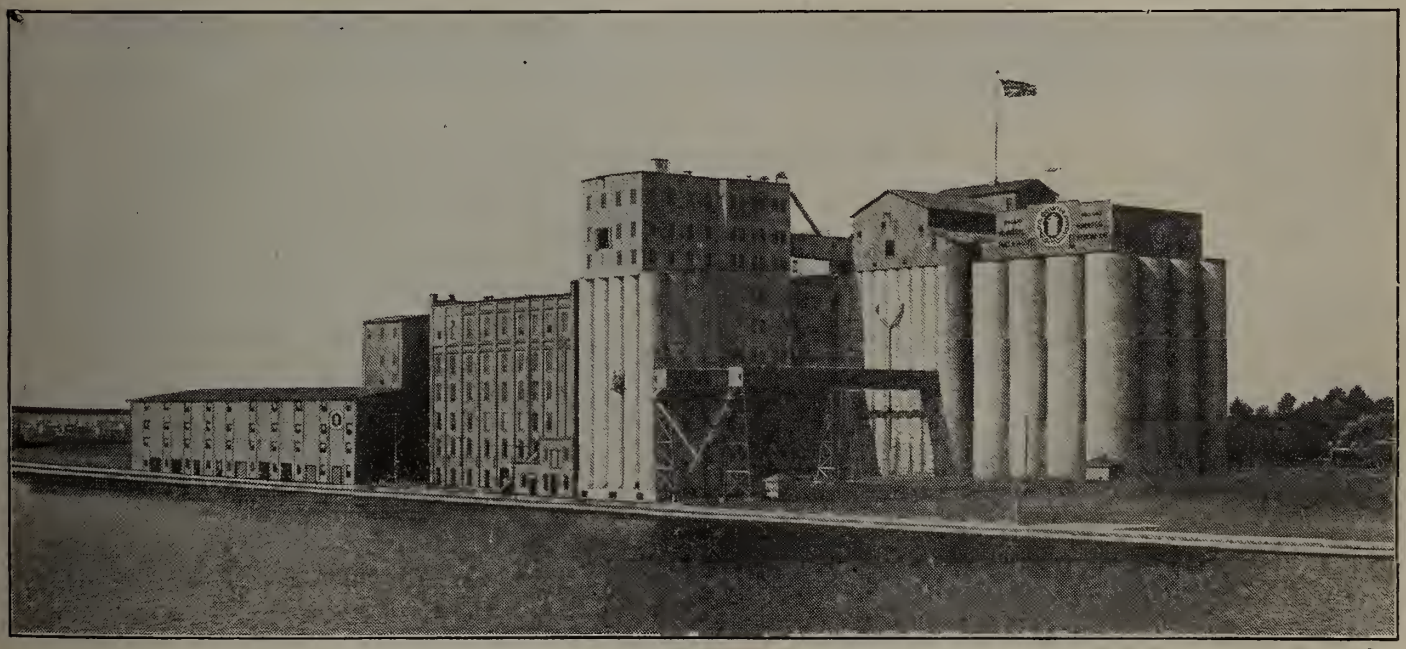
GLENORA

which are everywhere acknowledged to be

CANADA'S BEST

— MADE BY —

The Largest Millers In The British Empire



FORT WILLIAM MILLS

Mills at : MONTREAL, FORT WILLIAM, WINNIPEG, MEDICINE HAT

Daily Capacity, 22,250 Barrels

The St. Lawrence Flour Mills Co.

LIMITED

CANADA'S MOST MODERN AND BEST EQUIPPED MILLS
MAKERS OF CANADA'S MOST POPULAR BRANDS OF FLOUR

Regal

A high quality bread flour sold in bags of 7, 14, 24, 49 and 98 lbs. and in barrels of 98 and 196 lbs.

Quotations on car lots requested.

Fleur de Lis

A high grade bread flour sold in 98 lbs. bags and in 98 and 196 lbs. barrels.

The baker's favorite from Coast to Coast.

Offices & Warehouses: 1110 NOTRE DAME STREET WEST, MONTREAL, CANADA

The--Priceless--Thing--

Some millers will buy so-called Receiving Separators, Scourers, Packers, etc., that are little more than outward resemblances of the real article.

Invincible Machines

Are a Whole Lot More Than Contrivances

IT REQUIRED MANY MANY YEARS EXPERIENCE AND ENGINEERING TO PUT INTO THEM—THAT PRICELESS WORTH THAT CANNOT BE PHOTOGRAPHED.

Any other machine is expensive if you pay as much as you could have purchased an INVINCIBLE for. Scores of millers have learned this lesson.

Profit By Their Experience

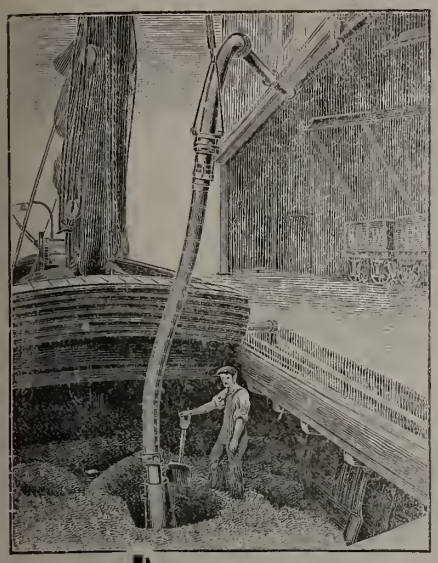
Another INVINCIBLE is the only machine that will work like an INVINCIBLE.

INVINCIBLE GRAIN CLEANER COMPANY

SILVER CREEK NEW YORK

Representatives:

Strong-Scott Mfg. Company, Limited, Winnipeg, Man.
James E. Preston, 284 Beaver Hall Hill, Montreal, Que.



Pneumatic Conveyors

Reduce Your Labour Cost

This type of plant will remove practically all grain contained in a freight car or ship's hold **without** trimming.

FLEXIBILITY
Can reach any point desired.

EFFICIENCY
Shows a ratio of 70% to 80% as compared with bucket elevators.

ECONOMY
No waste.
Saves dock and demurrage charges.

ERECTION
Plants constructed for any capacity or situation.

MANUFACTURED BY

ROBT. BOBY LIMITED,

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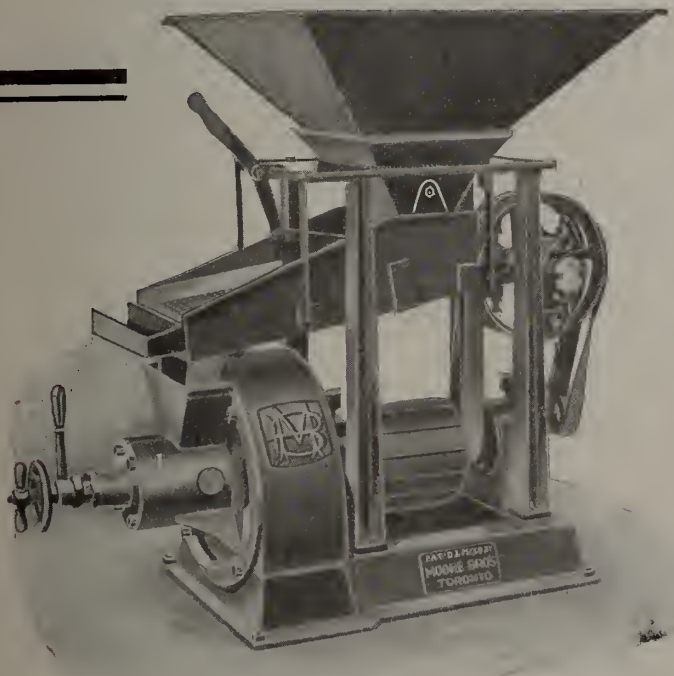

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CANADA'S ONLY MILLING AND GRAIN PAPER

Scientific Research in Milling

THERE is hardly a basic industry in the world which could have reached its present degree of efficiency and development without the aid of scientific research, the undoubted value of which is disclosed by a study of every-day affairs.

The great General Electric Company in the United States spent a few thousands of dollars investigating the properties of tungsten, and as a result has saved a quarter of a billion dollars or more to the people of the American continent. The Dupont Company, the explosives firm, frankly estimate that their research laboratories have meant a profit to them of over $80,000,000 in six years, or a return of 1.370 per cent. on their investment for research.

Highly organized research in the direction of agricultural machinery and implements have reduced the cost of farming by possibly hundreds of millions of dollars. Aluminum, which when first discovered cost $90.00 a pound, is now being manufactured at Niagara and Shawinigan Falls for 20 cents a pound or thereabouts.

In Canada, during recent years, the value of scientific research in regard to the production of grain has been evident in the development of Marquis wheat with the discovery of which the name of Dr. Charles Saunders, late Dominion Cerealist, will ever be associated and which has added hundreds of millions of dollars to the national wealth.

Consideration by the Scientific Research Bureau at Ottawa of the flour milling industry, one of the country's most important and valuable assets, and which offers unlimited opportunities for scientific research should, from the results which would undoubtedly be achieved be effort well worth while.

R. I. P.

DOOMED from the start because of its economic unsoundness the decision recently taken by the premiers of Saskatchewan and Alberta to abandon any further effort to bring control into effect this year did not greatly surprise the grain trade. The refusal of Messrs. Stewart and Riddell to associate themselves with the control board as chairman and vice-chairman respectively, prompted many to predict correctly that the plans legislated for the marketing of the 1922 crop would never materialize. When, however, to the refusals of the two gentlemen mentioned were added those of Mr. Henry Wise Wood, the standard bear of the wheat control party in the West, and Mr. Rice-Jones, as well as those of Messrs. John I. McFarland and James R. Murray, the drama, comedy, fiasco, call it what one will, was complete.

"Canadian Milling & Grain Journal" feels that one of the worst features of the whole question of control was the acquiescence of the Federal Government in the proposed wheat board plans. The bogey of the farmers movement evidently frightened the administration into paying more attention to that movement than its importance in the country warrants.

With the threatened destruction of their legitimate business removed, grain men from one end of Canada to the other will breathe easier. It is to be sincerely hoped that the undignified fate of this year's wheat control proposals will mean the permanent abandonment of any such despotic measures.

Cheaper Money in Sight

BRITISH financiers are reported to be of the opinion that the Bank of England rate which now stands at 3 per cent will shortly drop to 2½ or even 2 per cent thereby accentuating an era of cheap money which has already begun and the effects of which must naturally be world-wide. Indeed, at the present time government, corporation, municipal and other financing in many other countries besides Canada is being secured on a cheap basis.

The general tendency the world over is towards cheaper money. This is an excellent sign because cheap money is a powerful stimulant for that confidence which is so much needed at the present time and without which there can be no speedy or permanent recovery in economic conditions.

Cheaper money means cheaper capital facilities for trade and hence helps trade revival and enterprise. As regards new British capital for this country the subject of which was touched on editorially in our issue of August 15, the success which has met the flotations of new issues on the British market within the past month or so, points unmistakably to the fact that there are abundant resources in Great Britain awaiting investment. Canada's practically unlimited opportunities for the use of new capital cannot be too widely published or too strongly emphasized. Her basic industries having passed through their periods of reconstruction are firmly established on foundations from which they can develop and expand as the growing needs of the country require.

The Small Mill's Road to Success

IT seems to be the opinion of many small millers that owing to the ever-increasing competition in their business it is only a matter of time before

they, like others who have gone before them, will be compelled to close their doors and seek other means of making a living. Failures there of course are, and always will be in every business, and the flour milling business is no exception to the rule, but at the same time there is, perhaps, no business other than that devoted to the milling of flour in which properly directed individual effort meets with such success.

The flour milling business, however, is not the enterprise for a man lacking courage or a spirit of bold enterprise, Indeed, failure in the case of small mills can be said to be more often the result of timidity and false economy rather than of conditions before which the small miller regards himself as helpless.

Good wheat it is always possible to obtain and a good mill it is always possible to maintain and given these two essentials good flour and good trade should be assured, for, if a small miller can produce high quality flour at a reasonable price the selling end of his business should almost take care of itself.

One point which should be remembered by the owner of a small mill is that the man who is responsible for making the flour whether it be himself or a miller engaged on salary should NOT be compelled to worry with multitudinous details that must result in neglect of the mill. "That Divinity that doth hedge a King," should be the acme of plebianism compared with the atmosphere of freedom in which the miller should move and have his being. The fact that the man who is attending to the making of the flour appears to have time at his disposal does not necessarily mean that he is not putting his time to good use. In all probability it is due to the fact that he is making the best possible use of it.

A Suggestion for Elevator Operators

WHERE an elevator operator knows that grain growers in the district served by his house do not possess safe storage bins for grain on their farms, he should, in the interests of both himself and his clients urge the necessity and desirability of stacking grain instead of employing the costly and wasteful method of leaving the grain in the shock.

Grain in the shock, exposed to adverse weather conditions, suffers constantly from loss of weight and besides, is injured in color, the loss in weight by wheat in two or three months time amounting to from a pound and a half to two pounds per bushel. The grain too, suffers depreciation in grade while it is said by those who have made a study of the matter that the value of the grain lost through the depredations of birds and vermin, the action of the sun and the deleterious effect of bad weather conditions on the grain would be more than sufficient to pay for the stacking of the grain several times.

Apart from the fact that it keeps the grain in good condition, stacking partially solves the problem of congestion. It is the cheapest and best method of storage for the grain producer and makes him in a large measure master of the situation for when insured in the stack he can, if in need of funds, secure loans on his holdings.

Another point in the argument is that stacked grain leaves the ground clear for cultivation and in the stack wheat passing through the "sweat" improves in color and quality.

It will be seen therefore, that the practice of stacking wheat is one worthy of every consideration by grain producers and by urging it upon them owners or operators of elevators will be helping themselves, the producers and the country generally.

Other Points of View

IN MORE SUNLIGHT

London Daily News: The sunlight is, or ought to be, free to all; it is the only medicine which is really essential. The smoke nuisance is much abated even within the memory of men not old; but it might be immensely reduced yet by efficient laws, and it is criminal not to attempt it.

AN UNPROFITABLE BARGAIN

Cleveland Plain Dealer: For a time France listened with favoring ear to the proposal that in return for French consent to a reduction of German payments Great Britain would authorize a cancellation of the French war debt. This bargain cannot be struck. With much justice the British public fails to approve an arrangement which would coddle Germany and benefit France without any compensating British benefit.

THE VISION OF DISARMAMENT

Los Angeles Times: There is evidence that the will to peace is growing and that countries are now honestly contemplating substituting sacrifices for peace for sacrifices for war. Only France stands reluctantly aside, nursing her grievous hurt. But she, too, may be won to the newer honor, the newer, greater and finer sacrifices of peace, as the grim memory of the war recedes and the raw hurts tend to heal.

THE PUBLIC PAYS

Springfield Republican: That coal prices will be high the coming fall and winter is generally expected. They will be high enough, as a prominent Boston coal dealer has suggested in his letter to the governor, to compensate the operator and the others who handle their output, for losses occasioned by the strike. They will be high enough, too, to pay whatever wages the operators find necessary to concede in order to reopen their mines, which all are agreed have been closed long enough. And the public, as usual, will be gouged.

INJURING THE BEST CUSTOMER

New York Journal of Commerce: To the fair-minded observer, building a high tariff wall against Canada is harmful and stupid. Next to Great Britain, Canada is our best customer. During the eleven months ended May 31, our exports to Canada were $497,000,000, and to the United Kingdom, $768,000,000. In the same period, our imports were $277,000,000 from Canada and $243,000,000 from the United Kingdom. What inconceivable folly to injure our best customers! Why should a political border be turned into an economic wall, which, if high enough and drastic enough, would require a line of forts and gunboats to protect it? Both countries produce what the other needs, and free exchange is of mutual advantage.

Eastern Provinces
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MONTREAL SEPTEMBER 1ST, 1922

THE MONTREAL MARKETS

While the end of August marking as it does the passing of the old and the advent of the new crop, is usually extremely quiet in regard to the volume of business transacted, local dealers in flour, grain, millfeed and baled hay can be said to be passing through an exceptionally dull period at present. Both export and domestic orders for flour are practically negligible while conditions in the grain and feed markets are little if any better.

Flour.—Local flour prices following the recent western cut show a decline of 30 cents per barrel from last report. First patents spring wheat flour are quoted at $7.30, seconds at $7 and strong bakers at $6.80 per barrel. Winter wheat flour is quoted at $5.30 to $5.40, ex-store in broken lots in used jute bags, and 25c higher in printed cottons. In car lots, track, the price remains $4.90 to $5. White corn flour is unchanged at $4.50.

Grain.—There have been no new developments in the local grain market, extreme dullness ruling, prices being steady. No. 2 C. W. oats are quoted at 58½c; No. 3 C. W. oats at 53½c; No. 3 C. W. oats (tough) at 51c, and No. 2 feed at 48½c to 49c. No. 2 yellow corn continues at 79c, and No. 3 yellow at 76c.

Millfeed.—There continues to be little or no business passing in millfeed and prices are unchanged with Manitoba bran quoted at $25.25, shorts at $25.50, and middlings at $29.25. Standard grades of rolled oats are still quoted at $3.20 to $3.30 per bag of 90 pounds.

Baled Hay.—The market for baled hay is extremely quiet, and quoted prices for new crop are unchanged, being $18 to $20 for No. 2 timothy, and $16 to $18 for No. 3 timothy.

Condition of rolling stock for the new crop is never perfect, emphasizing the fact that elevator owners should pay careful attention to coopering. The wise man will use car liners.

LESLIE C. BRINE

Grain Trimming and Bagging

TELEPHONE St. Louis 6397F MONTREAL TELEPHONE St. Louis 6397F

FIRST UNIT OF NEW 8,000,000 BUSHEL ELEVATOR AT MONTREAL TO BE STARTED IMMEDIATELY

Montreal.—A new grain elevator with an initial capacity of 2,000,000 bu. but which will, as business demands, be increased until a total capacity of eight million bushels has been provided, will be erected by the Montreal Board of Harbor Commissioners. The new structure, which will be known as No. 3 Elevator, will be located on Tarte Pier. The cost will be approximately $2,347,000 for the first unit constructed.

According to the plans of the Harbor Board the first unit of the new house will be ready for business in the fall of 1923. Other units will be added as the necessity for same arises. The complete elevator, as planned, will be one of the largest in the world.

With the construction of the first unit, conveyor galleries will be provided to serve seven berths, four on Tarte pier, two on the upper bulkhead wharf and one on the lower bulkhead wharf. The Tarte pier conveyors will be built over the second storey, which will shortly be added to the present one-storey sheds there. The new elevator will be able to receive grain from the lake vessels by travelling marine legs at a rate of 40,000 bushels per hour, and in the same time will be able to unload 24 cars, or 48,000 bushels, the cars being emptied by car dumpers four at a time. The elevator will ship grain to ocean steamers at the rate of 90,000 bushels per hour to seven berths, each of which will be provided with two conveyor belts.

NATIONAL MILLERS' ASSOCIATION TO HOLD 2ND ANNUAL GENERAL MEETING IN MONTREAL LATE IN SEPTEMBER

The second Annual General Meeting of the Canadian National Millers' Association will be held in Montreal during the month of September on a date to be fixed after the views of members on the matter have been obtained. It has been tentatively suggested that the meeting take place on Friday, the 22nd. The trend of the opinion already canvassed would appear to favor a date between the 15th and 30th of the month.

As stated, the meeting will be held in Montreal, and will be open to any miller, whether or not a member of the Association. Members are specially requested to bring with them at least one non-member.

An interesting programme is being prepared by the board of directors through Mr. F. C. Cornell, secretary of the Association. Details of same will be sent to members in advance of the meeting together with copies of the annual report and financial statement.

HERE'S AN OPPORTUNITY

We draw attention to a flour mill which is in the market, sale of which is advertised in our Classified columns. (See page 32). This mill has been successfully operated for past 30 years, and is being sold only on account of the death of the late owner.

NEW CATALOGUE OF STRONG-SCOTT CO. NOW AVAILABLE FOR DISTRIBUTION

The Strong-Scott Manufacturing Co., Limited, Winnipeg, are now distributing their handsome new catalogue G of general flour mill and grain elevator supplies and power transmission machinery and equipment. The book which comprises 240 pages covers in the words of company's own slogan, "Everything for Every Mill and Elevator," from dump and motor truck scales and automatic power shovel mechanism down to cloth cleaners and sacking needles.

In the foreword to the new catalogue the Strong-Scott Co. emphasize the fact that since the organization of the company, 25 years ago, their aim has been to build business on the basis of service, honest goods and fair prices. The record of the steady growth of the business, it is pointed out, has, the company believes, demonstrated the soundness of this policy.

Besides illustrations of practically every item listed the addition of several pages of standard information concerning weights, contents and equivalents add materially to the value of the catalogue, copies of which will be gladly mailed on request to the Strong-Scott Company.

ADULTERATION OF CANADIAN GRAIN AT AMERICAN PORTS SAID TO PREVAIL

Montreal.—The allegations made by the London grain trade that American grain was being mixed with the Canadian product at United States ports were proved at a recent meeting held by the Dominion Minister of Trade and Commerce with the London Corn Exchange, says a London cable received here.

It was shown to the satisfaction of the traders present that no mixing of Canadian and American wheat was done at any Canadian ports, the trouble arising when Canadian wheat is shipped via United States ports, as a considerable amount is routed. Certain interests take advantage of the reputation enjoyed by Canadian hard wheat in the British market to mix in a proportion of American wheat and sell it as all Canadian.

British agents conducting an investigation at various United States ports by which Canadian wheat finds an outlet, report the existence of an organized system of adulteration. With the assistance of American interests they are confident that the practice will soon come to an end.

MONTREAL COMPANY INTERESTED IN BIG CHAIN DRIVE SUB-CONTRACT FOR SOUTH AFRICAN GRAIN ELEVATORS

Montreal. — In connection with the contract awarded by the South African Government to Messrs. A. W. Menkins Company, of New York City, for two terminal and thirty-six country station elevators in the Union, it is of interest to note that the Hans Renold Co., Ltd., of Manchester, England, have secured the contract for all the chain drives to be used in connection with the big undertaking.

For the Capetown Terminal Elevator thirty-eight Renold Silent Chain Drives are to be used, while 50 of the drives are to be furnished for the terminal elevator at Durban. For the 34 country station elevators provided for in the Menkins contract a total of 184 chain drives will be supplied.

The sub-contract calls for 272 silent and brush roller chain drives which will transmit varying powers from 7½ to 80 h.p. The contract is said to be one of, if not indeed the largest, single contract ever given for elevator chain drives.

The Hans Renold Company, of Manchester, England, is the parent company of Hans Renold of Canada, Limited, 11 St. Sacrament St., Montreal.

QUOTATIONS ON BRAN AND SHORTS

The following nominal quotations on bran and shorts have been reported by the Canadian National Millers' Association, Coristine Building, Montreal, to the United States Customs Authorities as the prices of these commodities now in effect. These prices are the net cash prices in bulk, f.o.b., the mill:

	Bran.	Shorts.
Montreal	$17.50	$19.50
Toronto	17.50	19.50
Port Colborne	13.00	15.00
Fort William	11.00	13.00
Keewatin	10.50	12.50
Winnipeg	14.00	16.00
Moose Jaw	10.00	12.00
Calgary	10.00	11.00

A CORRECTION

The James Richardson Co.'s new terminal elevator at the head of the great lakes, the important enlargement and improvement of which was described and illustrated on page 24 of "Canadian Milling & Grain Journal," issue of August 15 last, is located at Port Arthur, Ont., not at Fort William, Ont., as erroneously stated in the above article.

THE CHICAGO MARKETS

The following table compiled from figures furnished by Messrs. Logan & Bryan, members of the Winnipeg Grain Exchange and the Chicago Board of Trade, C.P.R. Telegraph Chambers, Montreal, show highest price levels recorded on Chicago Board of Trade from Aug. 11, 1922, to Aug. 26, 1922, inclusive.

	Aug. 11	Aug. 12	Aug. 14	Aug. 15	Aug. 16	Aug. 17	Aug. 18	Aug. 19	Aug. 21	Aug. 22	Aug. 23	Aug. 24	Aug. 25	Aug. 26
September Wheat..	1.06⅛	1.05	1.04⅜	1.01⅞	1.01⅝	1.03	1.02¾	1.00¼	1.01	1.03⅞	1.03½	1.03⅛	1.02⅜	1.02¼
December Wheat..	1.06¼	1.05	1.03½	1.02½	1.02⅝	1.04½	1.04½	1.01¼	1.02½	1.04¾	1.05⅛	1.04¼	1.03⅞	1.03¾
May Wheat.....	1.11	1.10	1.08⅜	1.07½	1.08	1.09½	1.09⅛	1.06¾	1.07¾	1.09¾	1.10	1.09⅜	1.09	1.08¾
September Corn...	0.59½	0.59	0.59⅛	0.59	0.60	0.62¼	0.61½	0.59½	0.59¾	0.60⅞	0.61½	0.61⅝	0.61¼	0.60⅞
December Corn....	0.54¾	0.53⅝	0.53⅛	0.54	0.54½	0.56	0.55¾	0.53½	0.54⅜	0.56¼	0.56¼	0.57	0.56¾	0.56
May Corn.....	0.57⅞	0.56⅝	0.56⅛	0.57	0.57½	0.59¼	0.59	0.56⅞	0.57¾	0.59⅛	0.59	0.60	0.59¾	0.59¼
September Oats....	0.31⅝	0.31⅛	0.30⅞	0.30⅞	0.31	0.31⅝	0.31½	0.30⅝	0.31⅛	0.32	0.31⅞	0.32½	0.32¾	0.32¾
December Oats....	0.34¼	0.33⅝	0.33¼	0.33⅜	0.33½	0.34⅛	0.34⅛	0.33⅛	0.33⅝	0.34⅜	0.34⅜	0.34⅝	0.34½	0.34¾
May Oats.....	0.37⅞	0.37	0.36⅞	0.37⅛	0.37⅛	0.37¾	0.37⅝	0.36¾	0.37⅜	0.37⅞	0.38	0.38⅜	0.37⅝	0.38⅛
September Barley..	0.54½	0.54½	0.53	0.53	0.53	0.53	0.53	0.52	0.52	0.52	0.52	0.52	0.52	0.52
December Barley..	0.53¾	0.53¾	0.53¾	0.53¾	0.53¾	0.53¾	0.53¾	0.53¾	0.53¾	0.53¾	0.53¾	0.53¾	0.53¾	0.53¾
September Rye....	0.72¾	0.72	0.71¾	0.70¾	0.70½	0.70⅜	0.70½	0.69¼	0.68½	0.68¾	0.68¾	0.69⅛	0.69½	0.69¼
December Rye....	0.73¾	0.73	0.72½	0.71⅛	0.71½	0.71½	0.71½	0.70⅜	0.70⅝	0.71	0.71⅜	0.71⅝	0.72	0.71¾

Ontario

TORONTO

TORONTO SEPTEMBER 1ST, 1922

THE TORONTO MARKETS

Flour.—With Ontario bakers generally looking for ninety-cent wheat buying is exceedingly light in the baking trade, while the demand for flour generally is extremely dull. Export demand, too, is small. There has been considerable price-cutting and any business there is is going to the big mills that have dropped their prices. Some mills are trying to sell flour to the bakers at $1 a barrel less than the present price quoted for delivery during the next two or three months, the idea being that if money is lost on the first shipments profit may be made later if the market goes down. As the market is at present bakers can buy flour away below the official quotations. Export business in Ontario winter wheat flour is quiet on account of large deliveries and consignments of Australian winter wheat flour in the United Kingdom market. The quotations they are sending on to Toronto are one shilling and six pence below what the Ontario dealer can sell flour at. Then the deliveries of Ontario wheat have not begun to get heavy as yet and mills are finding it difficult to get Ontario wheat to fill orders already taken. Ontario winter wheat flour is being offered at 34 shillings but the best counter offers are only equal to 32 shillings and six pence. In Manitobas, for export, particularly to U.K. ports, the quotations vary from 35 shillings to 38 shillings.

Millfeeds.—A recent feature in the local millfeed market was the drop of a dollar a ton, due largely to the plentiful supplies on hand and to the increased stocks of hay, oats and the coarse grains for feeding purposes. The reductions in prices came into effect about the middle of the month, bringing bran down to $23.00 and shorts to $25.00 per ton, Toronto and Montreal freights. Some of the mills, however, are accepting $22.00 and $24.00. White middlings are quoted at $31.00 and feed flour at $1.85 per 98-lb. bag. It is stated that some of the mills have had export runs and that there is considerable surplus of feeds in Ontario.

Oil Meal.—Oil meal is selling at $51.00 a ton but very little business is offering. With the good flax crop and other favorable conditions it is believed that September will see a resumption of buying with good supplies to offer.

Cereals.—A somewhat improved enquiry is reported for immediate shipment of rolled oats and oat meal on account of the delayed harvest in the United Kingdom. Prices on rolled oats range at 40 shillings to 40 shillings and six pence. The warm weather is responsible for a dull domestic market and very little business is passing. The domestic price is $2.00 per 90-lb. bag.

Grain.—Wheat prices are continuing to fall. Following the lower movement in Western markets, the Toronto cash market for No. 1 Northern was down to $1.27 lately, while No. 2 was 1¾c lower and No. 3 2½c lower. Large volumes of Ontario wheat are being purchased by American interests for export account. This wheat was taken chiefly from Essex and Kent counties and from $1.00 to $1.05 was paid for it. These two counties are well situated to take advantage of southern markets, because of the transportation facilities on the Michigan Central and the Pere Marquette Railway systems. Generally speaking Ontario wheat holds between 95c and $1.00, while Ontario oats are slightly easier at 33 to 35c. There has been some hesitation on the part of Canadian and American dealers of late to enter commitments for Canadian grain in view of the uncertainty as to what restrictions might be imposed by the Wheat Board which was then in prospect. As a result the grain market slumped considerably for want of support. A better demand for Canadian Western wheat from foreign sources is predicted now that the menace of the Wheat Board has been removed.

NEW CROP RUSH NOT YET STARTED

Fort William.—Very little of the new wheat is filtering through to the head of the lakes as yet some of the elevators having received just a few cars, but, as the inspection department is not marking the new wheat to distinguish it from the old, the office of the grain commission have no way of giving any official information as to the new grain arriving here. Lots of new rye has been taken in here.

From reports received by the elevator men at the head of the lakes and their experience with the few odd cars which have come through, this early crop is very dirty, being filled with foul weed seeds. All that has been received comes from Manitoba, where the fields are much worse infected with noxious weeds than those of the provinces farther west. It is believed that cleaner wheat will come forward later in the season. No rush is anticipated for ten days or a couple of weeks to come.

GRAIN BOARD COMMISSIONER SAYS WHEAT CROP ESTIMATE TOO HIGH

Fort William.—On his return recently from his last inspection trip through the West, Commissioner J. P. Jones, of the Dominion Board of Grain Commissioners, expressed the opinion that he thought the Government estimate of a wheat crop of 320,000,000 bushels would not materialize. He predicted that the crop would total round 280,000,000 bushels owing to the fact that some important growing centres, particularly the Goose Lake area, had poor crops. Commissioner Jones vacates his post on the grain board on September 1, and on that date will become manager of the Consolidated Elevator Company, Ltd., here. During his trip Commissioner Jones visited the government interior terminal elevators at Saskatoon, Moose Jaw and Calgary, and the terminal at Vancouver.

Asked whether he had heard much discussion of the wheat board and the abandonment of the scheme during his trip, Mr. Jones said this was the universal topic of conversation, and he had found that there were very divided opinions as to the wisdom of the wheat board policy, even among the farmers, opinion was by no means as unanimous as the advocates of the board would make it appear in their utterances.

OCEAN RATES ON FLOUR SHIPMENTS

The following ocean freight rates (nominal) from New York on shipments of wheat flour, oatmeal and rolled oats in sacks per 100 pounds are effective as of the 25th August, 1922.

	Wheat Flour	Oat-meal	Rolled Oats
	(Canadian funds)		
United Kingdom ports...	20c	20c	32c
	(American funds)		
Hamburg	17c	17c	39c
Bremen	17c	17c	30c
Rotterdam	17c	17c	28c
Amsterdam	17c	17c	27c
Antwerp	17c	17c	27c
Havre	20c	20c	37½c
Bordeaux	23c	23c	37½c
Lisbon	32c	32c	..
Copenhagen	25c	25c	45c
Christiania	25c	25c	35c
Gothenburg	25c	25c	45c
Stockholm	27c	27c	45c
Danzig	25c	25c	45c
Helsingfors	28c	28c	45c
Marseilles	35c	35c	65c
Genoa	30c	30c	65c
Naples	30c	30c	65c
Piraeus	25c	..	..
Salonica	25c	..	..
Smyrna	25c	..	..
Constantinople	25c	..	..
Alexandria	25c	..	..

TRADE OPPORTUNITIES

With a view to assisting the Canadian milling trade in the development of a permanent and profitable export business, "Canadian Milling & Grain Journal" publishes in each issue a selected list of trade opportunities, the investigation of which should prove of value. "Canadian Milling & Grain Journal" is taking special pains to ascertain the reliability of each opportunity presented and will gladly furnish any further information regarding them that may be desired.

THE EDITOR.

No. 277.—Messrs. Gilbert J. McCall & Co., Ltd., 9 Bishopsgate St., London, England, wish to get in touch with exporting Canadian millers with a view to representing them in the United Kingdom.

No. 278.—Messrs. Cole & Co., Ltd., P.O. Box No. 205, Bridgetown, Barbados, British West Indies, would like to secure representation for a Canadian flour mill. The firm is also open to consider an agency for Canadian feedingstuffs.

No. 279.—Messrs. F. L. Myers & Son, 188 Harbor St., Kingston, Jamaica, British West Indies, would like to get in touch with Canadian flour exporters who would consider giving them exclusive representation in Jamaica for their product. Terms: Cash in exchange for bill of lading at Jamaica on arrival of goods.

No. 280.—Messrs. S. Frankel & Co., 30 Marche des Oeufs, Anvers, Belgium, wish to represent leading exporters of Canadian grain in Belgium. The firm is well-known in Antwerp where they have been doing business for a great number of years, both as importers and as agents for grain. Bank reference: La Banque Union Bamcaire Belge, Anvers.

The Modern Sophocles

ARE YOU ABLE.—

To meet failure and obstacles on every hand?

To meet your enemies with love for hate, good for evil?

To move steadily towards your goal with a serene mind when you know that others ridicule and consider you a failure?

To remain in obscurity to support a parent, or a helpless sister or brother, when you have the consciousness of the ability to do big things?

To bear the blame which belongs to another because you do not want to bring pain to others?

To speak the truth when a lie would help you out of a difficulty?

To forego extravagance so that you may provide for the future welfare of those dependent upon you?

THE CANADIAN FLAX HARVEST

"The Canadian flax harvest has to do with three aspects of the market: 1, flax for seed; 2, flax for oil; 3, flax for the linen industry. The first two can be bracketed as far as crop is concerned.

"The area sown in Canada for these two purposes this year is estimated at 546,000 acres, as compared with 517,000 to 532,000 acres last year. The yield of seed last year was 3,500,000 bushels, and at the same rate the yield this year should be about 3,600,000 bushels, though this should be exceeded, as the conditions have been excellent for a heavy yield.

"Estimates made this spring showed a shortage of 27,000,000 bushels in the world's flax supply, so the Canadian flax seed grower should reap a good financial harvest.

"For textile purposes, the acreage sown this year is about one-fourth of last year's. Figures for the last four years are:

Year.	Acres.
1919	20,262
1920	31,300
1921	6,515
1922	1,500"

OBITUARY

After an illness lasting nearly a year Mr. Neil Black, superintendent of the Gillespie elevator at Fort William, Ont., died recently. Deceased came to Winnipeg from Scotland 42 years ago, and ten years later went to Fort William, where he became assistant superintendent at the government elevator. From there he went to the Dwyer elevator, a position he retained when the Dwyer interests were sold to the Gillespie Company.

Toronto.—A figure well-known in the Canadian milling trade passed away here recently in the person of Mr. Arthur B. Collins who was for eleven years city sales manager for the Maple Leaf Milling Co., Ltd. Deceased who was 62 years of age is survived by his wife, two daughters, and three sons.

Western Provinces

WINNIPEG

WINNIPEG SEPTEMBER, 1ST. 1922

THE WINNIPEG MARKETS

Flour.—The flour trade in Western Canada is showing distinct improvement and all mills are now generally busy. The larger mills in the Winnipeg district are receiving new crop wheat from Southern Manitoba points which they are now manufacturing into flour. The first baking tests from this new wheat were not quite so satisfactory as the old crop wheat, but this is believed to be due to the fact that the earlier loads of wheat to arrive came from districts where the land is light and been cropped successively with wheat for years. That the new wheat will average as high both in grading and from a baking test standard as former crops is anticipated.

The demand for flour for both domestic and export trade is reported very good, and is in strong contrast from the situation that has prevailed during the past few months, when many of the mills have either been closed down entirely or only running part time. Millers report sales are increasing daily and orders are now booked and further business in sight that will keep the mills working steadily throughout the fall months. Domestic stocks in the hands of jobbers and bakers have been allowed to reach a very low point, and now that prices have fallen to what is believed to be near the low point, the trade is showing more confidence and is being forced into purchasing on a broader basis. The export trade is principally via the Pacific coast to the Orient, while trade is steadily being worked with the British West Indies. The demand for spring wheat flour from Europe is poor, it is stated, and any business that is being done is in small quantities. This is largely due to the demoralized financial conditions of Central Europe and the preference of Great Britain, France and Italy for wheat that will keep their own mills in operation and provide the needed millfeeds for cattle.

On Monday, August 21, flour prices were reduced 30 cents per bbl., due to the decline in wheat prices. Present mill prices are as follows: For delivery at points between Fort William and the Saskatchewan boundary, first patent springs are quoted at $7.00 bbl. in jute bags; seconds, $6.40; first clears $5.10; second clears $4. Saskatchewan and Alberta prices the 10c under the above. These prices are for straight or mixed cars 30-day terms. Cotton sacks are 20c over this basis.

Millfeeds.—The demand for bran and shorts is moderate throughout the prairie provinces, but there is an excellent market in British Columbia. There is no accumulation of feed stocks at the mills. There has been no change in prices, quotations being: Bran in mixed cars with flour, $20 per ton, and shorts $22, in bags, delivered, Winnipeg territory.

Oatmeal.—Rolled oats and oatmeal are slightly firmer, the demand showing improvement and finally has overtaken the supply, and the situation is now encouraging after a long period of depression. A few mills are actually behind with deliveries. Scarcity of milling oats is a marked feature at the moment, and the trade are waiting for the movement of the new crop. Present quotations are: rolled oats, cash, in mixed cars $2.75 in 80 lb. cotton bags, and oatmeal 25 per cent. over rolled oats, delivered, Winnipeg territory.

Rye Products.—The demand for rye flour is very ordinary, and it is difficult to get official prices as the local mill is now closed.

Flax Seed.—The demand for linseed cake and meal is reported as very dull, while at the same time there is an excellent demand for oil, both raw and boiled. Prices are quoted at $50 per ton for cake, and $52 for meal. Oil is much firmer, $1.20 being asked for raw and $1.23 for boiled.

THE GRAIN MARKETS

During the second and third week in August the wheat market worked steadily lower on a lack of buying power. Closing on August 19 at $1.00½, a serious decline of 8¼c in two weeks, and incidentally falling to the lowest price for this position wheat for some years. Business has, for this time of the year, been extremely dull, but the new crop is moving at an average rate.

The chief reason for the unfavorable situation was the depressing effect of the uncertain future of the Wheat Board, but with the definite announcement that the Board is "off," as far as this year is concerned, it is only natural to expect a revival in trade. At the same time, however, the distressing financial condition of Europe and the excellent crop reports have been against price enhancement. Exporters have been quiet, showing a waiting attitude and only trading on a hand to mouth basis. A valuable trading month was wasted while the Provincial Governments were dabbling with the Wheat Board scheme, and it is feared that it will have some effect on the economic condition of the West and that the producer will be the ultimate loser.

A large Greek order was expected but it turned out to be for only 10,000 tons, 370,000 bushels, or only about 25 per cent. of the anticipated order. The Department of Statistics at Calcutta announces the production of wheat in India for the 1921-1922 season at 366,352,000 bushels as compared with 250,-469,000 bushels the previous season, and 347,909,000 bushels, the average yield for the five-year period 1915-19. At the same time, however, the surplus of world wheat is not large. Broomhall estimates the European production at 120,000,000 bushels smaller than last year.

Oats.—Outside of a keen interest in No. 2 C.W. by exporters this cereal has been almost entirely neglected, both cash and futures being dull, and moving in sympathy with wheat.

Barley.—The futures have not been very active but exporters have shown a keen interest in the cash article. Light stocks, however, restricted active trade and buyers are waiting for the new crop.

Flax.—The futures have been weak in sympathy with outside markets but Canadian crushers have taken care of the small available stocks of the cash article.

Rye.—Cash trade in this cereal has been quite large, the new crop moving in fair volume. During the latter part of the week receipts were heavy but little was coming out as the farmers were holding for higher prices.

SUGGESTS NEW WHEAT MARKETING PLAN

Regina, Sask.—A concrete suggestion outlining the method which might be adopted by the banks to assist the farmers to market their grain in such a manner as to prevent the glutting of the wheat market and a consequent depression in prices has been telegraphed to Premier King by Premier Charles A. Dunning, of Saskatchewan.

Pointing out that the banks stand "at the base of the pyramid of credit," Mr. Dunning suggests that "if they could devise some means of extending portions of amounts due them from all creditors to enable more gradual liquidation," he felt sure that the effect would be felt through all classes of creditors, "down to the farmers and probably prevent slaughter of wheat prices."

Mr. Dunning points out that merchants as well as farmers stand creditors to the banks in considerable sums of money and his proposal involves a gradual liquidation of their bank indebtedness by all creditors, thus eliminating the necessity for merchants and others crowding the farmers for cash payments early in the fall.

The telegram to Premier King follows the receipt of Mr. Dunning of a communication from Sir Frederick Williams-Taylor, representing the Canadian Bankers' Association in which Sir Frederick announces that the banks will furnish "all proper banking accommodation to care for this year's crop," coupled with his personal assurance "that the banks will show the farmers every proper consideration, being deeply interested in the welfare of their customers and the prosperity of your province."

C. P. R. GRAIN LOADINGS HEAVY

Winnipeg.—Heavier marketing and loading of new season grain for the third week of August than for any other corresponding period since 1916 is reported by Canadian Pacific officials.

For the week ending August 21 there had been marketed by grain growers adjacent to the Canadian Pacific a total of 1,562,386 bushels, or an average of 260,286 bushels per day. During the same week the railway loaded a total of 938 cars.

In the home of a Toronto man the police found 160 bottles of whiskey, 42 bottles of brandy, 24 bottle of gin and 211 bottles of wine. It is thought that he must have been expecting a pal to spend the evening with him.

SAYS NEW WHEAT MAGNIFICENT

Winnipeg.—"Magnificent wheat," said Mr. Andrew Kelly, president of Western Canada flour mills, referring to a sample received at his office of newly threshed grain from Carman, Manitoba. According to Mr. Kelly's information the yield was something over 40 bushels to the acre, and from the sample it would grade number 1 northern, weighing 63 to 64 pounds to the measured bushel.

Local mills already are busy making baking tests of new wheat flour. Mr. Kelly had a loaf of new wheat bread in his office. Asked as to tests, he said that on the whole they were satisfactory. Number 1 northern wheat, the only grade so far tested, was not quite up to last year's old wheat in gluten and protein, but that is usually noticeable, it was pointed out, in wheat that was threshed very early. The bread was not quite as white as old wheat bread, but had a fine appearance and flavor.

NEW CROP WHEAT GRADING HIGH

Winnipeg.—That the great bulk of new western Canada crop is of highest grades is indicated by recent inspections of new wheat receipts of the Winnipeg market. Of ninety-two cars of wheat received in one day lately, 53 cars graded number 1 Northern, two cars number 2 and one car number 3 Northern. Of the balance 33 cars were rejected because they contained weed-seed but when the seed is extracted the remaining wheat also will grade high. Wheat now coming in is mostly from southern Manitoba and rejected cars are those in which there is an over percentage of wild oats, running as high in some cases as 15 per cent. of the total weight. Wheat itself is of top grade, state the inspectors.

C.P.R. LEASES TERMINAL ELEVATOR D.

Moose Jaw, Sask.—The Canadian Pacific Railway Company has leased the last of its terminal elevators, namely Elevator D, at the head of the lakes, on a long term lease to the Consolidated Elevator Company interests.

Mr. Coleman, vice-president of western lines was here for a short time recently, en route to Victoria. He declared that the outlook in Canada was much brighter with the bountiful harvest. He also expressed keen satisfaction at the settlement of the Alberta coal strike.

THE WESTERN MARKETS

The following report furnished by Messrs. Baird and Botterell, 103 Grain Exchange, Winnipeg, shows daily highest price levels from Aug. 11, 1922, to Aug. 26, 1922, inclusive.

	Aug. 11	Aug. 12	Aug. 14	Aug. 15	Aug. 16	Aug. 17	Aug. 18	Aug. 19	Aug. 21	Aug. 22	Aug. 23	Aug. 24	Aug. 25	Aug. 26
October Wheat....	1.07¼	1.05¼	1.04¼	1.03⅛	1.02¾	1.03⅞	1.03⅝	1.01½	1.00⅞	1.02½	1.02⅜	1.01	1.00½	1.00¼
December Wheat..	1.04	1.02	1.01	1.00	1.00⅜	1.01¾	1.01⅜	0.98½	0.98½	0.99¾	0.99⅜	0.99½	0.98	0.98
October Flax.....	1.93½	1.92½	1.92½	1.95	1.97	1.97	1.95¼	1.92	1.92¼	1.89	1.86⅜	1.85½	1.82½	1.81⅛
December Flax....	1.89⅜	1.89⅜	1.84⅜	1.85¼	1.87½	1.88½	1.87	1.85	1.82	1.80	1.77	1.76	1.74	1.72½
October Rye.....	0.70¾	0.70	0.69½	0.69½	0.68¼	0.68	0.68	0.66¾	0.66⅝	0.66⅝	0.66¾	0.67	0.67⅛	0.67½
December Rye....	0.67	0.67	0.66	0.66	0.65⅜	0.65⅝	0.65	0.65	0.65½	0.65⅝	0.65⅜	0.65½	0.65⅝	0.65⅜
October Barley....	0.53¾	0.52½	0.52	0.51½	0.52¼	0.52⅞	0.53	0.52½	0.52¾	0.52¾	0.52⅞	0.53	0.53	0.52
December Barley..	0.50½	0.50½	0.50	0.50⅛	0.50⅛	0.50½	0.50½	0.50½	0.50½	0.50¼	0.50¼	0.50¼	0.50¼	0.50¼
October Oats.....	0.40⅜	0.39¼	0.39⅛	0.39¼	0.39⅜	0.39¾	0.39¾	0.38¾	0.39	0.39⅞	0.39⅝	0.39⅞	0.39⅝	0.39⅞
December Oats....	0.38½	0.37½	0.37⅛	0.37½	0.37⅞	0.38¼	0.38⅛	0.37⅜	0.37½	0.38⅜	0.38⅜	0.42⅛	0.38½	0.38½

Foreign Flour and Grain News

CONTINUED weakness in the wheat market, due in large measure to the abnormally distressed financial conditions of European buying countries as well as to the certainty that the 1922 crop will be a huge one, was reflected in a recent cut in flour prices by 30 cents per barrel. Reports from western points indicate that the demand for flour from both export and domestic sources is becoming increasingly satisfactory. The bulk of the export trade being handled is for the Orient and the British West Indies. Flour orders from Great Britain show a decline due to an increasing milling output in these countries. Current quotations for spring wheat flour at Montreal are $7.50 for first patents; $7 for second patents and $6.80 for strong bakers, per barrel. Winter wheat flour shows an advance over last report, and is now being quoted at $5.30 to $5.40 ex-store in broken lots in used jute, and 25 cents higher in cotton. White corn flour which is steady at $4.50 shows no change.

Export business in Ontario winter wheat flour is quiet owing to large importations of the Australian product by Great Britain, one of the most important buyers of this commodity.

RUSSIA.—At the Congress of Agriculture held at Moscow recently, it was stated that the one bright feature of the situation was that sowing operations had been completed satisfactorily, although the acreage has not been increased. However, it has recently been authoritatively stated that the grain crop of Russia this year will be sufficient to meet the requirements of the population, an opinion which receives some confirmation by a report that permission is shortly to be given for the sale of vodka, in the manufacture of which are employed large quantities of Rye or potatoes.

ROUMANIA.—Latest advices report that dry, hot weather has recently prevailed. Harvesting of wheat, rye, barley and oats has practically terminated, and threshing is now in full swing. There is a general anticipation that wheat and rye returns will show splendid yields, both in regard to quantity and quality. Some early fields of barley have not yielded as well as anticipated, but there is still widespread expectation of a very large crop. No samples of oats have yet been shown.

JUGO-SLAVIA.—Although wheat is threshing out very irregularly, a good average crop is generally expected. Supplies of old wheat are practically exhausted. A heavy downpour of rain is reported in the Batchka, which will be of great benefit to maize. Light rains have also been experienced in other parts of the country.

INDIA.—The latest report from the Viceroy states that the agricultural situation is generally good, but rain is needed in North-west India and Kathiawar. Lack of rain at the present time will affect the growing food-grain crops, the abundance or shortage of which strongly influences the native demand for wheat.

ARGENTINA.—Late cable advices state that the rains recently reported have been followed by seasonably cold weather. It is to be hoped that this welcome change will be of sufficient duration to condition maize and strengthen the young wheat, oats and linseed plants. Sowing has made satisfactory progress.

AUSTRALIA.—Extensive rains are reported to have fallen in New South Wales, where, owing to lack of moisture, conditions have hitherto been unfavorable for the wheat crop.

FRANCE.—Reports from all over the country state that the wheat crop is well below that of last year, but no further quantitative estimates have been issued. On the other hand, oats and barley receive very favorable comment, and these crops are expected to yield markedly better than in 1921. There is little likelihood of the proposed new law providing for the re-introduction of long milling becoming operative before September 1, 1922. The proposal to make provision for the compulsory admixture of a fixed percentage of rice, rye, etc., will probably be abandoned, for the time being at least.

ITALY.—The Government have issued their first estimate of the wheat crop which they place at 20½ million quarters, as compared with 24,000,000 quarters last year. This estimate may be regarded as satisfactory, only in so far as it is appreciably better than private forecasts. Taking an average of the past five years, the average annual consumption of wheat in Italy is 30½ million quarters, but the heavy distribution during the past season would seem to indicate that at the present time the actual consumption is greater than this figure.

GREAT BRITAIN.—There is only a quiet demand for home-milled flour. In London millers have reduced their quotations 1s. (0.22½) per sack, but Liverpool millers maintain last quoted rates. Very little is doing in foreign flour; new American Winters are still held above importers' ideas, and there has been very little attempt at business for shipment. Australian afloat is offered at 35s. 6d. ($7.70) and 36s ($7.92), c.i.f.

INDIA.—A Government Notification, dated June 17, 1922, extends until December 31, 1922, the period during which grain, pulse, and wheat flour may be imported into British India free from customs duty.

CZECHO-SLOVAKIA.—The notable improvement in the crop outlook has been well maintained. All cereals may be expected to give an average outturn this year.

HUNGARY.—Some damage, the extent of which is at present not ascertainable, has been done to the crops by excessive heat, and rains are badly wanted for late crops.

JAPAN.—The wheat crop in this country is reported to be average, but insufficient for home consumption. It is thought that nearly as much wheat will have to be imported in 1922/23 as in the season now closing.

NORTH AFRICA.—Latest reports are to the effect that although the crop yields in Algeria and Tunis are generally poor, the outturn is better than anticipated. As was generally expected, wheat is yielding better than barley or oats. A poor average crop has been harvested in Morocco.

The Principles of Correct Elevator Construction

(By A. C. RYNDERS)
President of the National Grain Elevator Builders' Association.

The first thing relative to building an elevator is selecting the proper location for same.

When I was a young fellow in the elevator business, the railroad not only furnished a site and a side track but they were perfectly willing to pay the taxes on the elevator for the benefit of having a receiving station for bulk freight. At the present time, they want you to build on your own land, pay for a switch and pay your own taxes and work for the railroad company for nothing.

There are many things to take into consideration in picking a location for an elevator. In the first place determine the amount of grain tributary to the station where you wish to build; also a high dry point is preferable to any other, but our choice would be one where the main travel could reach the elevator with the smallest amount of inconvenience.

Another consideration is a dry place to dig the pit and a solid place to put the foundation. Any of these latter may be overcome by proper handling of the foundation and waterproofing of the pit.

Consideration of Size

The next thing to take into consideration would be the size of an elevator to build. To arrive at the size and the kind of material to use, it is necessary to go into figures quite extensively but our recommendation has always been that an elevator that will hold three days' receipts at a busy time, is ample for any country receiving station for the simple fact that if you can not get cars, it stands to reason that they are all on their way to market with grain.

At this time, you are very much afraid if you sell your grain for 10 days' shipment that you can not get cars. Therefore, you hold your elevator full of grain and in nine cases out of ten the grain goes down because every ounce of energy in the country is expended towards getting this grain to market.

There should be enough bins to hold a full carload of each kind or grade of grain received during any one season of the year together with one empty bin for the second carload, and another bin should be left to turn wet or heated grain in case of necessity.

Should be High Enough

The elevator should be high enough to load cars without shovelling. The equipment should be heavy enough to handle grain as fast as it can be dumped and the bins should all be self-cleaning. In fact, any elevator should be built to require the least amount of manual labor possible as every particle of labor costs must be substracted from the amount received before there is any profit left.

The kind of elevator to build is oftentimes not left up to the owner or the contractor but is dependent upon the city ordinance; and the kind of elevator, whether concrete, brick, steel, tile, cribbed or studded is often times left to prejudice instead of facts and figures.

We have asked some western contractors to give us an approximate idea of the price of different kinds of elevators. From their estimates these figures are taken. A 20,000 bushel concrete elevator with a proper number of bins to handle the ordinary country station, would cost in the neighborhood of $25,000, a brick from $22,000 to $23,000, the steel approximately $18,000 to $20,000 and the tile is practically the same price. A cribbed elevator would cost $13,500 and a studded $11,800, all with the same number of bins and the same handling equipment and we figure the same amount of labor and expense would operate every one.

Taken on this basis, the interest on a 25,000 bushel elevator at 7 per cent would be $1,750. Figuring the tax rate at $1.75 per hundred, would cost $437.50. The insurance rate on the fireproof elevator with corn sheller and other like machines at 14c would be $35.00. Figuring the depreciation at 3 per cent would be $750.

While there are a great many that will not agree with any of these figures, still, we figure in 30 years or 35 at the most, most country elevators will be entirely out of date; therefore, the upkeep should be figured on this basis.

You will see by this table that at 5c per bushel, you would have to handle approximately 113,450 bushels a year to pay your overhead expenses without figuring any of the smaller items such as stationery and office expenses, loss, etc.

Kind	Price	Int. 7%	Taxes @ $1.75	Insurance Rate	Insurance Amt.
Concrete	$25,000	$1,750	$437.50	14c	$35.00
Brick	25,000	1,750	437.50	14c	35.00
Tile	20,000	1,400	350.00	14c	28.00
Steel	17,500	1,225	306.25	14c	24.50
Cribbed	13,500	945	236.25	75c	101.25
Studded	11,800	825	206.50	75c	88.50

Kind	Depreciation Rate	Depreciation Amt.	Oper. @ $100 per month	Mgr. @ $125 per month
Concrete	3%	$750	$1,200	$1,500
Brick	3½%	875	1,200	1,500
Tile	4%	800	1,200	1,500
Steel	4%	700	1,200	1,500
Cribbed	5%	675	1,200	1,500
Studded	5%	590	1,200	1,500

Kind	Total	Bu. @ 1c per bu.	Bu. @ 5c per bu.
Concrete	$5,672.50	567,250	113,450
Brick	5,797.50	579,750	115,950
Tile	5,278.00	527,800	105,560
Steel	4,955.75	495,575	99,115
Cribbed	4,656.50	465,650	93,130
Studded	4,411.00	441,100	88,220

A concrete or tile elevator while entirely fire resistive are subject to dust explosions to some extent and we believe that all of these types of elevators should have a ventilated cupola and pit.

Elevator equipment is as varied as the number of the contractors installing it. It makes no difference what kind of an elevator that is to be built, if the foundation gives away, it is one of the things that can not be cobbled up. If you have the best elevator in the world and the best foundation in the world and the motor power won't pull or won't run, your elevator will do you no good.

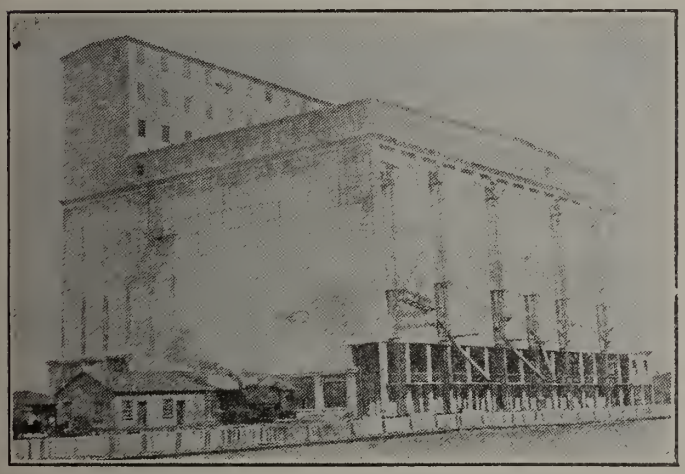
The Elevator Operator

THE VALUE OF CONCRETE AS A SAFEGUARD AGAINST FIRE IN ELEVATOR CONSTRUCTION

Apropos of the item which appears on page 24 of this issue recording the destruction by a fire of an elevator belonging to the United Farmers' of Ontario Co-operative Society at Leamington, Ont., hardly a day passes that a wooden elevator is not injured by fire in some part or other of the country. If the reported loss was large it is fairly certain that grain was destroyed, that is, food was destroyed.

Why should grain be stored and handled in burnable structures when the investment in a non-burnable structure will pay good dividends on the additional sum required over the cost of the wooden elevator or storage plant. The price of lumber for an elevator has nearly doubled the last year, and deliveries of lumber shipments are very slow.

THE GOVERNMENT ELEVATOR AT PORT COLBORNE, ONT.



This modern up-to-date house, which was destroyed by a dust explosion followed by fire three years ago, is a striking example of the use of concrete in elevator construction.

Depreciation on an elevator built entirely of concrete is small while a 5% per year depreciation on the wood elevator is a conservative figure. The depreciation and upkeep of the machinery is much less in a concrete building owing to the solidity of the structural supports and the absence of vibration.

The safety afforded the business is a matter which each owner can decide for himself. The day is past when the elevator can be replaced in sixty days. It is exceptional to secure the delivery of lumber within that time. In past years almost immediately shipment could be depended upon from the lumber mills of northern Minnesota and Wisconsin. Now 90 per cent. of the lumber must come from the Pacific coast.

There are plenty of uses for our diminishing lumber supplies other than for the construction of elevators which are peculiarly liable to combustion.

Reinforced concrete has proved to be the most flexible of all materials in the construction of grain elevators and storage tanks. It is claimed that 99% of the larger grain elevators and storage at the terminals and possibly 90% of all the fireproof country elevators are now being built of reinforced concrete. In certain parts of the structure, such as the exterior and partition walls of machinery floors brick or tile may be used. But where grain, earth or water pressures are to be resisted, reinforced concrete is the logical material.

Reinforced concrete can be used more economically in the construction of grain elevators and storage tanks, as the use of lumber for forms in these structures is a minimum and such lumber is available in any yard. The materials for the concrete structure can be assembled in less time than for the wooden elevator. No doubt before the building season is over there will be a great scarcity in building materials of all kinds, as the outlook for general building the country over seems to point to a bigger year than last year.

A recent fire in the concrete elevator of the Fruen Cereal Co. at Minneapolis, demonstrated the fire resisting qualities of concrete. On the first floor of this elevator were several attrition mills with wooden feed legs, sacking spouts, reels and conveyor boxes. The fire burned out the installation in one bay and the only damage was a slight spalling of the concrete over an area a few feet square, to a depth of less than ½ inch, resulting in no injury to the strength of the bin bottom slab. If, however, the bin bottom slab had been carried on exposed steel beams, the heat developed would have been sufficient to cause the steel to sag and very possibly collapse under the load.

RECORD VOLUME OF GRAIN SHIPMENTS

Montreal.—That the amount of grain shipped from the port of Montreal to Europe in 1922 will be many million bushels greater than the record volume of last year is believed by local grain men to be almost an assured fact. From the opening of navigation to the evening of Wednesday, August 23, a total of 72,123,621 bus. was carried down the river as compared with 69,757,240 bushels during the same period last year, and all indications point to a largely increased flow during the remaining months of the present season. The situation is regarded as eminently satisfactory by local harbor authorities, in as much as the port is better prepared to handle the traffic than it was at this time last year, and is said to be capable of accommodating with ease all the grain to be shipped. Grain has been kept constantly on the move since the beginning of the season and a noticeable improvement over last year has been the complete absence of any sign of congestion. With the big harbor elevators working more than twenty hours a day and the placing in commission of two floating elevators, the number of vessels in port at any one time has been notably reduced and the strain upon the port's facilities correspondingly lightened.

The Elevator Operator

BETTER WEIGHTS ON GRAIN SHIPMENTS.

UNLESS a grain shipper has a track, hopper, or automatic scale it goes without saying that he cannot file and collect grain shortage claims to which he would otherwise be entitled. Even if he has such a scale he is in the same predicament, unless that scale receives systematic inspection.

Carriers are constantly asking the shipper for increased accuracy in his loading weights on grain shipments. But to what extent are they extending the co-operation that is so necessary to attain that end?

Both shipper and carrier must admit that periodic inspection of grain scales is necessary to insure their accuracy. But how is the country shipper to get this inspection? He will never be able to get it until some kind of concerted co-operation on the part of the carriers is given in the attempt to work out a solution with the various grain associations.

One railway system in the United States seems to have made some advance along this line. A "scale car" visits each elevator at regular intervals, inspects the scale and makes whatever repairs are necessary. Complete equipment is carried in the car to make immediately whatever repairs are necessary. The necessity of sending the scale away for repairs and losing the use of it is avoided. The railroad performs this service at practically cost.

Carrier Company Shold do Work

The carrier is the organization which should perform this inspection service. The railroad sends men to most elevators to investigate the accuracy of the loading weights on claims after they are filed. If the men who gave the reports as to the accuracy of the scales were men equipped to inspect and repair the scales, it would seem that more reliable information would be gained, and if the scale was working incorrectly, it would be set right and claims which are based on incorrect weights obviated.

The carrier is in a financial position to equip such "scale cars" as are necessary, provided the grain associations in advance made such a financial investment feasible for the carrier by securing contracts from their members calling for the rendering of such inspection service by the carrier. This work, it would appear, cannot be done efficiently if the service is to be rendered to a shipper in one of the provinces and then next to a shipper in another province. But if all of such shippers or the large majority on any line of railroad signed up for such service, the cost of moving the scale car equipped with test weights and necessary repairs from one station to another would be such that a thorough, regular and frequent scale inspection service could be worked out.

Both the carrier and the shipper are interested in correct weights. If the shipper's weights are accurate it can only work to his advantage to have the carrier know it. If they are not accurate, the carrier will in most cases have some suspicion of it, and hold up the payment of the claims and the sooner he gets the scale working correctly, the better off he will be. If the carrier has first hand information as to which scales are correct and which incorrect, the payment of money on claims for shortage with incorrect weights is avoided.

WHERE WINNIPEG GRAIN EXCHANGE STANDS ON QUESTION OF CONTROL

Winnipeg.—"The grain trade now, as before, is opposed to the nationalization of the marketing of wheat," declares a statement issued by the council of the Winnipeg grain exchange dealing with the steps which preceded the recent formal abandonment of the 1922 wheat board.

A telegram from the council to Mr. McFarland in reply to his "enquiry for the sympathetic co-operation of the grain trade as a condition of his accepting the position," reiterates the stand of the trade. "Members representing large investments," it was stated, "conscientiously believe present grain trade methods are superior to government trading and deny government wheat trading would assist farmers. Grain companies will make larger advances to farmers than wheat board could, and farmers can sell when they please. Pressure on farmers to sell is not due to method of marketing and will remain no matter what is the price of wheat as long as farmers obligations concentrate upon them at harvest time." The opinion was offered that failure of the board would be attributed to the grain trade if the trade offered to co-operate with you," "you or any other chairman," and the members of the exchange refuse to accept "any responsibility for creation of board or for its operations one way or the other."

LEAMINGTON ELEVATOR DESTROYED

Leamington, Ont.—Fire following a gasoline explosion totally destroyed the elevator of the United Farmers' Co-operative Society here recently. Mr. Alfred Sedrington, manager of the elevator, who was in the basement of the elevator when gasoline leaking from an engine exploded, was burned about the head and arms while fighting his way out of the building. Several thousand bushels of wheat and other grains were in the elevator awaiting shipment. One ton of sugar was also destroyed. The damage is estimated at $25,000.

Spoiled by heat and water from six streams, the grain bulged out the walls until they fell, showering sparks and flaming brands over other buildings. Damage to these was slight.

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Engines and Cars await Grain Rush

Preparations upon a monumental scale for the marketward movement of Western Canada's 1922 grain crop have been made by the Canadian National Railways. Hundreds of giant locomotives and tens of thousands of freight cars have been put through the Railway's shops at Winnipeg and made fit and ready for the greatest traction effort of the year—and of many years.

This mobilization of equipment has been in progress since the beginning of the year, with the result that Canadian National Railways are now fully prepared, waiting, and even eager to get to the business of hauling grain. If all the engines ready for service were placed end to end, they would stretch out for a distance of more than ten miles; while if all the cars prepared since the first of the year for the movement of grain were placed end to end, they would stretch out approximately 350 miles.

The locomotives ready to move the crop have an average length of 65 feet. Some conception of the enormous power represented in these iron steeds may be gleaned from the statemntn of fact that assuming them to be equal to the Mikado, capable of drawing 4,540 tons; the hauling capacity of these locomotives would be 121,520,339 bushels of wheat if all the engines were hauling capacity trains at the same time.

Elevator, Mill & Personal Notes

Vancouver, B.C.—During the 1921-1922 shipping season now closing the government elevator here exported 6,579,105 bushels to the United Kingdom and the Orient. This is the actual wheat shipped and does not include that lost in screening.

Brandon, Man.—The Midland Grain Company's elevator here, owned by Messrs. Randall, Lee and Mitchell, Limited, Winnipeg, was destroyed by fire recently. The elevator, which had a capacity of about 25,000 bushels, enjoyed the distinction of being the first built in Brandon having been up 40 years. It was at one time owned by the Ogilvie Flour Mills Co., Ltd.

Toronto.—It was announced at a recent meeting of the Welland City Council that the Maple Leaf Milling Company, Ltd., had arranged to take a load of flour to Wales and that a return cargo of coal would be brought back in an effort to cope with the fuel shortage.

Claysmore, Man.—The Federal Grain Company has commenced work on the erection of a new standard elevator here.

Foam Lake, Sask.—The Victoria Elevator Company, Ltd., is making rapid headway in the construction of a new elevator here. The new house is the fifth elevator at this point.

The Anglo-Canadian Grain Co., formerly the Saskatoon Grain Co., and operating a private wire system throughout western Canada, decided recently by unanimous approval of the directors to go into liquidation.

The Strong-Scott Manufacturing Co., Ltd., Winnipeg, have secured a contract for the installation of a 10,000 bushel capacity Morris Grain Drier in the Government grain elevator at Vancouver. The plant is to be ready for operation in October next.

Mr. S. J. Lawellin, formerly with one of the largest United States mills as chief chemist, is now with the Milton Hersey Co., Ltd., Winnipeg, and is in charge of the cereal department of the firm's Winnipeg laboratories. Mr. Lawellin was re-elected president of the American Association of Cereal Chemists at their last convention. The Milton Hersey laboratories are now ready to give Canadian mills a complete service of chemical laboratory and research work.

Col. J. S. Dennis, C.M.G., chief commissioner of the department of colonization and development of the Canadian Pacific Railway Company is in the West at present.

Mr. N. M. Paterson, president of the N. M. Paterson Co., grain merchants, after spending a few days in Winnipeg, returned to Fort William recently.

Mr. W. J. Kerr, of the Kerr Milling Company, Ltd., Dundas, Ont., was a recent visitor to Toronto.

Mr. M. A. Pollock, manager of the Canadian Flour Export Company, Limited, Royal Bank Building, Toronto, and Mr. H. L. Rice, of the St. Mary's Milling Company, returned recently from an enjoyable fishing trip to the Havelock district.

Mr. Robert Baird, of Mr. W. C. Omand's office, Royal Bank Building, Toronto, is spending his vacation in Muskoka.

Commissioner J. P. Jones, whose term of office as a member of the Dominion Board of Grain Commissioners expired on September 1, has assumed the duties of manager of the Consolidated Elevator Co., Ltd., at Fort William, Ont.

Mr. E. W. Kneeland, vice-president of the Port Arthur Elevator Company, Port Arthur, Ont., left recently for his summer home at Kenora.

Mr. R. Hetherington, Secretary of the Dominion Board of Grain Commissioners, who spent a week's holiday in Little Current, Manitoulin Island recently, returned to Fort William. Mr. Hetherington will spend the balance of his vacation in Duluth.

Mr. J. O. Morin, representative at Quebec City of the Western Canada Flour Mills Co., Ltd., was introduced on 'Change on a recent visit to Montreal by Mr. Jack Marshall, local manager of the company.

Mr. George Lawrence, baker, of Toronto, was a recent visitor in Montreal. While in the city Mr. Lawrence was introduced on 'Change by Mr. W. B. Wood, president and managing director of the Dominion Flour Mills Co., Ltd.

Mr. J. B. Craig was elected president of the Winnipeg Grain Exchange recently by acclamation. Mr. J. A. Richardson is the new vice-president of the Exchange for the year 1922-1923, while Dr. Robert McGill retains his post as secretary-treasurer.

Mr. Ben Moir, of Halifax, was introduced on 'Change during a recent visit to Montreal by Brig.-Gen. A. E. Labelle, vice-president and general manager of the St. Lawrence Flour Mills Co., Ltd., and president of the Canadian National Millers' Association.

Mr. James Innes, of Sutherland, Innes & Co., coopers, Chatham, Ont., was introduced on 'Change during a recent visit to Montreal by Mr. Thos. Williamson, president of the St. Lawrence Flour Mills Co., Ltd.

Mr. Donald Carrick, secretary-treasurer of the Maple Leaf Milling Company, Ltd., Toronto, is back at the head office of the company in Toronto after a protracted illness. Mr. J. A. Lehman, head accountant of the company, has also been away from his post through illness.

Mr. J. S. Barker, vice-president and general manager of the Maple Leaf Milling Company, Ltd., Toronto, is spending his vacation at his summer home in Muckoka.

Mr. William Hay, of Messrs. William Hay & Co., millers, Ailsa Craig, Ont., was a recent caller on the milling and grain trade in Toronto.

Mr. S. R. Stewart, formerly of Stewart Bros., New Hamburg, was a visitor to Toronto on his way back with his family after holidaying in Muskoka recently.

Mr. R. A. Thompson, president of the Dominion Millers' Association, Lyndon, Ont., spent a day or two in Toronto recently. Mr. Thompson's many friends noted that he had almost completely recovered from his recent illness.

AS USUAL

Millers who are in the habit of getting their overhauling done on time and without any trouble are, as usual, buying their supplies of us this season.

As we fill orders from day to day, we notice familiar names—millers who have been buying from us season after season—some of them ever since we have been in business.

Such continued patronage would, obviously, be given only to a house that has been rendering a satisfactory service.

" Satisfactory Service " has become synonymous with Strong-Scott. It is the result of a continued effort to supply " Everything for Every Mill and Elevator" promptly, efficiently and at a fair price.

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THE PRACTICAL MILLER

MILL TRANSMISSION SYSTEMS

By J. H. FLORA*

The early mills, the mortar, and pestle, needed no means of transmission as the power was applied directly to the grain. The stone burr needed a shaft for the burr and the water wheel. But with the advent of the modern mill with its complex system and large number of machines it was and is necessary to drive the large number of machines from one source of power. And these machines must run at a certain speed. No miller can conceive of a mill wherein one machine may slow down or speed up at intervals.

This makes it necessary to use a complex driving system as the different machines may be located at any place in the mill. Each machine must have enough power delivered to it to pull the load that the machine will carry when choked down.

The machinery manufacturers know from experience what speed and power is required for each machine. When a mill is to be built and the miller lays out the flow and selects which machines are to be used, the designer of the mill will lay out necessary transmission to drive each machine at the proper speed.

The source of power may be water, steam, internal combustion engine or electric motor. The use of any of these may be determined by the local conditions. For instance, where oil or gas is plentiful, either steam or internal combustion engine may be used, while in a large city or industrial center with a cheap electrical rate, electric power may be used to a better advantage.

The steam plant does not need any comment, as it is well known to all millers. The internal combustion engine should be carefully studied before purchase, for the types are many and varied and at the present time many changes are being made due to war time discoveries.

Electric Power Advantages

The electric power has several advantages. In the first place, the large central power plants with the large turbines are much more efficient than the small steam plants, and as the coal pile is the large end of the power cost this extra efficiency means a lower power cost. Likewise, an electrically equipped mill does not need the skilled labor that a steam plant does, as the only wearing parts of a motor are the two bearings and switch contacts, and these can be kept in good condition by periodic inspection and repair. In the case of a burned coil in a motor a competent electrician should be procured, and if only a few coils are burned, these can be "cut out" and the motor put back in operation in an hour or so. The cause of a burned coil is usually a burned bearing or poor switch contacts. The first case is due to the moving part of the motor dragging on the stationary part which causes a friction heat that burns the windings of the motor, if allowed to run in this condition for any length of time. A poor switch contact may allow one set of wires to carry more than their share of the current, and the rest of the motor carry none. This will burn out the overload coils if circuit breakers are not set properly. In a case of this kind the motor usually fails to start when the switch is closed.

The Synchronous Motor

A very desirable type of motor is a synchronous motor, which runs at a constant speed. This motor is very efficient and produces desirable characteristics in the central station which will cause the power company to give good rates for its operation. However, this type of motor is hard to start. It will not start a load from a standstill, in fact, until recent years an extra motor was used to get it up to speed. A clutch must be used to connect the load to the motor after the motor is at full speed. There are two kinds of clutches. First, there is the mechanical clutch where a lever arrangement is used to force a driven plate on the main line shafting against a driven plate on the motor. The trouble with this type of clutch is that it tends to grab the whole load at one time and cause the motor safety switches to open up.

The second type of clutch is the magnetic clutch built by a firm in Milwaukee. This type of clutch has the driven plate pulled against the driving plate by means of a set of magnets. These magnets are energized from the switchboard and the operator can attend to the motor controls while throwing on the load, which is an important factor when loading up a motor of this type. A variable resistance coil or rheostat should be mounted on the switchboard in multiple with the clutch magnets. This controls the current through the clutch and varies the force pulling the plates together and allows the clutch to slip if necessary to prevent the mill from being speeded up too quickly. The normal starting time of the mill with full load on is about twenty seconds.

Magnetic Clutch Feature

A very desirable feature of the magnetic clutch is that the wiring carrying the current to the clutch can be run up through the mill to safety switches on the various floors. If any of these switches are opened the clutch will open up and release the load. This safety feature may save a machine from being destroyed, or may save a human life. The clutch will not operate until all the safety switches are closed, so it is impossible to catch men working on the machines when starting up the mill. This safety feature is more positive than a safety switch which throws open the main switch of the driving motor.

The cost of the mechanical and magnetic clutch is about the same. The magnetic clutch is so built that repairs can easily be made.

Some mills have several driving motors instead of one. In this case the motors control are connected together so that all motors start together and stop together. But this means a large amount of delicate control mechanism to be affected by the dust of the mill, and the wear and tear on the mechanism itself. This may cause sufficient trouble to offset the cheaper cost of installation. Another bad factor is that the operator cannot see the motor start. This means a fire and electrical hazard.

(To be concluded.)

*Superintendent of Transmission for Southwestern Milling Co., Kansas City, Mo., at Annual Convention of the Association of Operative Millers.

THE PRACTICAL MILLER

PROCESSES FOR IMPROVING FLOURS

LAST year a number of patents were issued in this country and in Europe for processes for conditioning or improving flour, besides mechanisms for aerating and maturing flour. A United States patent was granted for a process which proposes to treat meal, flour, cereals, beans or tubers with about 0.70 per cent. of the weight of the material to be treated, of a solution of hydrogen peroxide of 3 per cent. strength. The treated material is then exposed in a thin layer on a travelling belt conveyor, to the action of actinic rays.

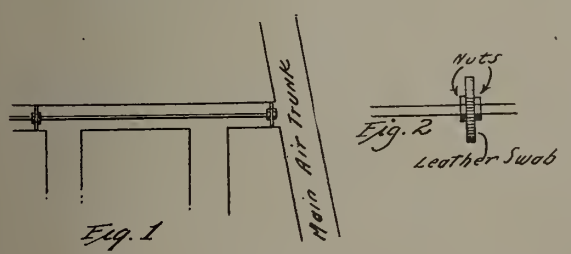
A separate patent to the same party covers a process for treating flour or meal with sufficient chlorin to react upon the enzymes present and render them inactive. The material is then treated with hydrogen peroxide and exposed to ultra violet light in order to produce nascent oxygen, which last is the improving or bleaching agent.

Several British patents have been granted for processes. One of these is for a bleaching and oxidizing agent to be prepared in a special manner, with other salts, such as calcium hydrogen phosphate to be added to form a baking powder mixture which may be incorporated in the flour.

Another British patent covers a process whereby flour and other cereal products are bleached and matured by treatment with nitrogen trichloride. This is applied in the form of vapor mixed with air or some other inert gas. Chlorin in the form of a gas or in water solution is passed into liquid or mixed with a solution of an ammonium salt. Air is then passed through the liquid to carry off the nitrogen trichloride. The ammonium chloride may be treated with bleaching powder—or ammonia mixed with air, or with carbon dioxide may be passed over bleaching powder. In other cases a solution of chlorin may be neutralized with limestone and mixed continuously with ammonium sulfate solution. The liquid may be sprayed or aerated in order to vaporize the nitrogen trichloride.—American Miller.

SWAB FOR SUCTION PIPES

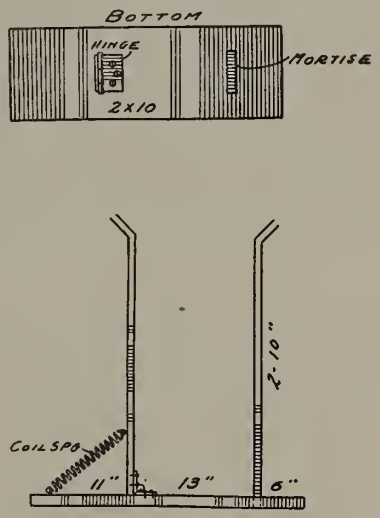
Suction pipes should be swabbed out frequently, though some millers give them very little attention. A good swab for cleaning these pipes can be made by threading a long rod and placing in succession on it a nut, a leather washer, and another nut, as



shown in detail in Fig. 2. To keep this leather from catching in the opening to other pipes a second washer is placed back near the other end of the rod as shown in Fig. 1. It will act as a guide to hold the rod in the centre of the pipe.

A HANDY BAG HOLDER

The accompanying sketch shows the form of bag holder which a practical miller has used with great success and satisfaction. It is extremely simple, as can be noted, and explanation of its construction is



hardly necessary. The dimensions as given in the sketch can be varied of course to suit individual needs.

PROPER ADJUSTMENT OF BELTS

The employment of pulleys of as large diameter as possible and propelled at a high speed is undoubtedly the true philosophy of transmitting power by belts.

Not high speed alone, but adhesive force, must be gained to do work without destructive tightness or slippage of the belt; therefore there should be a proper proportion of pulley diameter and belt contact.

The working adhesion of a belt to the pulley will be in proportion both to the number of square inches of belt contact with the surface of the pulley and also to the arc of the circumference of the pulley touched by the belt.

This adhesion forms the basis of all right calculations in ascertaining the width of belt necessary to transmit a given horse-power. The wider the belt the greater its driving power, by reason of its increased area of contact with the pulley through the driving.

The adhesion of the belt to the pulley is increased and the liability of slipping is decreased more at a high speed than at a low speed.

Therefore it is best to use small pulleys and run them at high velocity than large pulleys and run them slower. Besides the cost is less and the appearance much neater.

Power is not directly proportional to the belt's width, as in many cases the wide belt will not bed down well, and in such cases, especially with high tensions, a narrow belt has greater proportional driving power than a wider belt.

THE PRACTICAL MILLER

In heavy tensions, however, the wider the belt the less the stress per inch on the fastenings and the greater the reserve of driving power.

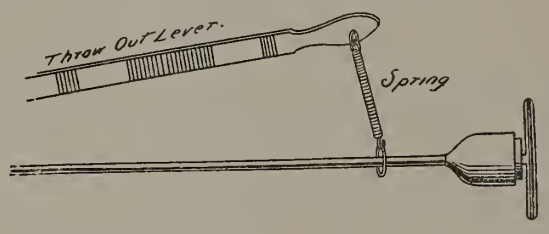
Horizontal belts between horizontal shafts drive better than inclined ones do, and still better than vertical, because the weight of a horizontal belt tends to increase not only the arc of contact on both pulleys, but the tension as well.

Generally speaking it is best that the angle of the belt with the floor should not exceed 45 degrees.

Running belts between vertical shafts is the least desirable, and should be avoided whenever possible, because gravity, instead of increasing the adhesion of one fold, as when horizontal, pulls both folds alike from the pulleys.

A THROW-OUT LEVER SPRING

Many millers have had difficulty from time to time with the throw-out lever on a one roll stand. It has refused to stay down when thrown in thereby



letting stock run through roll unground. The accompanying illustration shows a simple plan by which all trouble of the kind described can be eliminated.

THE BAKER AND ASH CONTENT

The baker is the one who gets the least value from, and makes the most fuss over, an ash determination. It would seem that they have some idea that the percentage of ash has some direct relation to the quality of the flour. Just what this relationship is would be hard to say. It is certain that there is no definite connection between the per cent. of ash and the quality of flour. It is quite true that with wheat of the same kind and class a flour of a certain percentage will somewhat tend to vary in quality as the ash varies. To what extent this can be carried has never been determined, but it is believed to be within very narrow limits and to be not alone, caused by ash. Naturally in buying his flour the baker should know the ash content and should use it as an indication of grade only. The per cent. of ash would show no appreciable effect on the quality of the flour or the bread baked therefrom. Knowing the ash content of the flour he specified, the baker has every reason to expect flour that will not vary over 0.02 per cent., from that figure, always taking into consideration the difference in moisture content. If he is afraid the miller will ship him a cheaper flour he certainly has the privilege of having his flour analyzed to see if he is getting the grade he purchased. But does he take into account the lowered moisture content occasioned by transportation and storage? If not he is doing the mill an injustice. To condemn a flour on the percent. of ash alone is an injustice to any flour. The baker should not buy flour on ash content alone nor should he specify a certain percentage of ash.

Ash Indicates Quality and Uniformity.

Summing it all up it would seem that the miller's main use of ash is in the operation and control of his mill, to assist in making his mill mix, and as an indication of the quality and uniformity of his milling. He is undoubtedly the one who gets the most value out of the ash determination.

The baker makes use of the percentage of ash as an indication of the grade of the flour. He may also use it to check flour shipments and see that he is getting the grade he purchased. To purchase the flour on ash content alone is certainly a poor business system.

The ash test is of importance, but not in determining flour quality or value. Its greatest importance, outside of mill control, is when supplemented by a complete chemical analysis, and to fail to make allowances for variation of conditions of determining ash and variations of moisture content, is to fail to be fair.

BRITISH FLOUR EXTRACTION

It has been an almost invariable rule that the percentage of flour extracted from wheat should be governed by the prevailing price of wheat. In the days when millstones were considered as being indispensable, millers used to extract about seventy-five per cent of flour from wheat. About the time of the introduction of roller milling, a considerable reduction in this extraction was made. Records relate that the reduction was not caused by the change of system, but it occurred simultaneously with a drop in wheat values and was doubtless made on account of the fall in the price of the miller's raw material. In the millstone days wheat was generally worth over fifty and sometimes over sixty shillings per quarter. About the time of the inception of roller milling wheat hovered between forty and fifty shillings per quarter. Shortly afterwards wheat gradually fell to the thirty shilling level, and we find that millers were satisfied with a 68 per cent extraction. In 1907, when wheat regained the forty shilling level, millers had perforce to extract more flour, and a seventy per cent extraction became almost general. The question is, with the present cost of wheat, what should the extraction of flour be? The price of offals must be reckoned concurrently with that of flour, and above all we must not lose sight of the fact that if we are to get the better of foreign competition, we must go all out for quality, and nothing but the best must suffice. A glut of low grade flour is an impediment to the market. On the other hand, the percentage of extraction must be such that it will recompense millers for the high price of wheat.—(Milling, Liverpool.)

THE PRACTICAL MILLER

PROPERLY MANAGED SMALL MILLS NEED NOT FEAR COMPETITION

Periodically the question crops up as to whether the small mill, as such, can maintain its position in competition with the supposedly cheaper-worked large mills, and apparently the small mills themselves supply the answer in the affirmative by showing that they can, and do, hold their own, whatever the competition. The success, however, of any mill depends upon the manner in which the business is conducted. Mills have been bought, and sometimes actually built, by people who knew nothing about either a mill or the flour business, and if such mills have proved successful it has been because either the owner was possessed with an unusual amount of business shrewdness or he was fortunate enough to secure someone who did know not only how to make flour, but also how to run a business on commercial lines, for this, after all, is one of the chief, if not the chief point in the successful prosecution of any business. But perhaps a worse thing than not understanding a business, and in not having someone who does, is to be in the hands of an incompetent man, who imagines himself to be a perfect manager, and uses all his arts and artifices to induce others, and particularly his employer, to believe and accept him as such. His main effort is to conceal his incompetence and deceive his employer until the inevitable disaster overtakes him, when he generally clears out, leaving his employer a wiser, sadder and poorer man. Properly worked small mills can not only hold their own, but with the many advantages they possess of local markets, can be made to render a good account of themselves, and even become very profitable, as has been proved in many instances in the past. The chief danger, however, which is most to be feared is the notion that if a small mill is profitable a larger mill must be more profitable, and the temptation to extend beyond the mill's legitimate trading limits. Although most of our large businesses have been built up from humble, and even insignificant, beginnings, it is to be remembered that they are the few successful survivors amongst the many who set out on a similar career. It is a case of many being called, but few chosen, and it is better to pursue a safe course as a small miller than to risk disaster in the attempt to become a large one. At the same time a natural and healthy progress is not to be discouraged.

INSECTS IN MILL MEAN HEAVY LOSS

Statistics show that the annual loss sustained in this country by the milling trade, through the ravages of weevils and insect pests, runs into probably many thousands of dollars. This, to a very large extent, could be eliminated if the proper care was exercised in protecting grains, cereals, etc. One of the best means of doing this is by the free use of Pyrethrum or so-called Insect Powder, a small quantity of which will go a long way and mean a saving of very many times the small investment.

One of the curiosities of the botanical world, commonly unknown to the public, is the Pyrethrum plant, whose flower when dried and powdered is known as insect powder. Varieties of the Pyrethrum family (Chrysanthemums) are cultivated in Canada as ornamental plants, but do not have the insecticidal properties of the true species, Pyrethrum Cinerariaefolium.

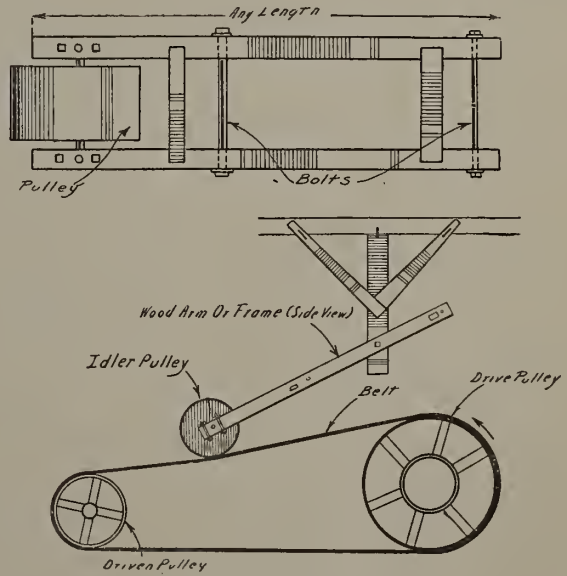
"What makes the bugs die?" is the natural question asked. The answer lies in the Oleo-resin of the powder which, when the powder is strewn near them, gets into the air, is drawn into their breathing pores and causes stupefaction and death.

Prior to the world war, the chief source of supply for Pyrethrum flowers were Dalmatia, Montenegro, Persia and Japan, but because of war conditions, Japan during the war and for a year afterward supplied most of the world. With re-opening of the previous sources the trade can now count on receiving both the Dalmatian and Japanese varieties.

The oleo-resin, the source of the insecticidal properties, appears to reach its greatest development when the flowers are just about to blossom or open. The half blown and full blown flowers yield a powder of less strength or efficiency than the buds or closed flowers. In addition to the flowers, the cut stems of the plant are imported and ground, but contain little insecticidal value; practically none as a matter of fact, and are therefore, classified by the Department of Agriculture as being worthless or inert.

TIGHTENING BELTS

Here is a sketch of an excellent home-made belt tightener which will do good work. The apparatus is made from scraps about the mill and is suspended



from the ceiling as shown. When the drive for which the tightener is required is not in use the tightener arm may be hooked up to the ceiling out of the way. This also takes the weight off the belt.

"Maude's pet dog has been run over; she'll be heartbroken." "Don't tell her abruptly." "No, I'll begin by saying it's her husband."

THE PRACTICAL MILLER

CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

ENERGETIC and thoroughly competent mill and sales manager, now in charge of 200-barrel mill in Western Canada, seeks responsible position with live Canadian milling company. Ten years road and sales experience with large Canadian mill. References furnished. Reply Box 120, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

SALESMAN AVAILABLE for the Province of Quebec. Excellent connections in Quebec City and district. Has had several years experience and has represented several leading firms. Can furnish best of references. Reply Box 114, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED — By Head Miller, with 20 years practical experience in modern Canadian mills up to 4,000 barrels capacity. Can guarantee best results as to quality and yield on both hard and soft wheat, and maintain mill at highest point of efficiency. At present in charge of a 1,000 barrel plant. Reply Box 85, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

WANTED by well-established milling firm in British Columbia experienced miller to operate 50-barrel Midget Marvel Mill and feed grinder. Applicant please state experience, giving references, and salary required. Reply Box 124, "Canadian Milling & Grain Journal," Phillips Square, Montreal, P.Q.

MILL FOR SALE

SEVENTY-FIVE barrel roller mill, modern machinery, separate elevator capacity 20,000 bushels. Flour warehouse, 60 tons capacity. Equipped with Chopper, Corn Sheller, and Oat Crusher. Electric Power. Reply Box 121, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—One 50-barrel Greey flour mill, 4 stand, 9 x 19 Rolls. Plansifter, cleaners, scourers, elevators, etc., all of which are in good condition. To be moved from building they now occupy. Reply Box 123, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANT TO BUY a complete grain elevator, with belting and cups. State size and particulars. Box 49, "Canadian Milling & Grain Journal," Dubrule Bldg., Phillips Square, Montreal.

RYE FLOUR WANTED — State approximately quantity could ship regularly. Box 118, "Canadian Milling & Grain Journal," Dubrule Bldg., Phillips Square, Montreal.

LEADING BRITISH IMPORTERS OF CANADIAN FLOUR AND GRAIN

D. T. RUSSELL & BAIRD
Limited

FLOUR, OATMEAL
— CEREALS —
PRODUCE & FEED

Head Office - 73 Robertson St., Glasgow
Also at London, Leith, Dublin
Cable Address: "Delight", Glasgow

W. M. READ & CO.

IMPORTERS OF FLOUR

30 Mark Lane
LONDON, E. C. 3

Cable Address: "THANEHOOD"

Mardorf Peach & Co.

- FLOUR - IMPORTERS

London - - England

SIDNEY SMITH
IMPORTER

Flour, Grain, Feed, Oatmeal and all Cereal products

47 GREAT TOWER ST.
LONDON (ENG.)

Cables: "Trontopri, London"
Codes: Riverside, Bentley, Baltimore, A B 5 & 6 editions and Western Union new 5 letter code.

WM. GILCHRIST & COMPANY

:: FLOUR ::
IMPORTERS

93 Hope Street, GLASGOW

Cable Address: "EGMONT"

Archibald Hamilton William T. Scott

Bruce & Wilson

:: FLOUR ::
IMPORTERS

70 Wellington Street - GLASGOW
CABLE ADDRESS "CALYPSO"

THE PRACTICAL MILLER

WATER POWER FOR SALE.—One thousand horsepower on three leading Canadian railways and Great Lakes waterway. Less than 5 per h.p. per year. Elevator close. Town of five thousand population. Situated in Old Ontario. Reply Box 111, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

POSITION WANTED as head miller in a small or medium sized mill. Applicant has had twenty years' experience. Thirty-seven years of age. Reply Box 110, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED—Experienced miller, to take charge of mill in Western Canada. Give age, experience and references. Reply Box 122, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

WANTED immediately. Flour salesman for Eastern and Western Ontario. Will give liberal terms to right man, who must be able to secure quantity distribution with good record. Reply direct to the James Goldie Company, Ltd., Guelph, Ont.

FOR SALE — Flour mill machinery. Practical enough to fully equip small mill. All modern and in good shape. Attractive price. Reply Box 116-6, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

SALESMAN, with first-class knowledge of flour and feed trade in the Maritime Provinces is available for engagement. Results guaranteed. Excellent references. Reply Box 113, "Canadian Milling & Grain Journal, Dubrule Building, Phillips Square, Montreal, P.Q.

SALES EXECUTIVE,

Several years experience as principal in Ontario and western grain business, also feed manufacture and distribution; thorough knowledge of French; conversant with grades, options, premiums, hedges, freights and carrying charges. Wants to connect with first-class grain or milling concern. Reply Box No. 115, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Miller, thirty-seven years of age, is open to take charge of small or medium-sized mill, or to take position as second miller in large plant. Has had twenty years experience. Thoroughly familiar with all branches of milling. Can furnish excellent references. Reply Box 107, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

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CANADIAN GRAIN, FLOUR AND FEED
BROKERS AND COMMISSION DEALERS

Continuous
Grain Quotations Received
CHICAGO WINNIPEG
LOGAN & BRYAN
Members
Chicago Board of Trade
MONTREAL TORONTO
Extensive Private Telegraph Wire Connections

C. R. Vannatter Co.
LIMITED
SHIPPERS, DEALERS, EXPORTERS
We specialize in Western Oats, American Corn and Millfeeds of all kinds.
619 DOMINION BANK BUILDING
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T. F. HARCOURT
Grain & Commission Merchant
Dealer in all kinds of Western Canada and Ontario Grains and Mill Feeds also American Corn and Milling Wheat.
Private wires to all leading Canadian and American Markets.
ROYAL BANK BUILDING
TORONTO

Grain and Hay Merchant
MONTREAL
W. J. Hushion
1195 St. James St. Tel. Up. 7572

MILTON HERSEY CO., LTD.
(Established Over Thirty Years)
Comparative Baking Tests. Wheat Flour and Feed Analyses. Referee Work. Consultation on Milling Chemistry Problems.
Paris Building, Winnipeg, Man.

DAVID MAHAFFY
FLOUR AND MILL FEED
Wholesale
B 6 Board of Trade Bldg.
MONTREAL

THE PRACTICAL MILLER

The Question Box

With a view to making this department one of real service, "Canadian Milling & Grain Journal" cordially invites its readers to send in their problems to The Question Box. There are but very few millers or elevator operators who do not have worries in the proper conduct of their plants. It may be due to lack of experience or inability to trace cause and effect. The logical and sensible thing to do is to ask someone who may possibly know. Often he is not at hand, and still oftener the perplexed miller or elevator operator does not want to show his lack of knowledge. Under these circumstances he can address his inquiry to the craft through this journal. His name will not be divulged if he wishes to remain incognito. Someone is sure to reply who has had similar problems to meet or similar questions to ask. We guarantee to devote all the space necessary to the asking and answering of questions, so do not be backward in sending them in. THE EDITOR.

QUESTION.—Should differential belt slip off on break roll, what would be the result of the grinding?

ANSWER.—Should the differential belt come off, the slow roll would stop if not set to touch the fast roll, if there were no feed passing between these rolls; but if there were feed passing through the roll, then the slow roll would run as fast as the fast roll and there would be no grinding action, simply rolling action. So, if the differential belt should slip, the grinding action would be cut in proportion to the amount of the slip.

QUESTION—What is the maximum amount of chlorine gas that can safely be administered to a hard wheat flour intended for commercial baking purposes? Is it safe to use as much gas on flour made from yellow berry wheat, and containing about 10.25 per cent. protein as on a flour made largely from dark wheat, and containing around 11.00 per cent. protein?—B. L.

ANSWER—Two ounces to the barrel is considered the maximum amount of gas to apply to any hard wheat flour. Many mills only use one and one-half ounces, the results being equally as good as when two ounces are used, and the danger of over-bleaching entirely eliminated. Answering second part of above question: No, it is not. The weaker your flour is in protein the less of the gas it will stand. The firm who sells the chlorine bleacher makes an extensive study of the effect of gas upon flours of different strength, and can give accurate advice as to the amount to use on any flour in any section of the country.—A. J. C.

Vancouver. — A Vancouver syndicate is being organized to finish sheep and hogs on cleanings of Western elevators. Cleanings contain a large percentage of noxious weeds, which still make good fattening for food. The danger in selling promiscuously is that the seeds might become scattered and create a noxious weed danger. The plan is to centralize the flock in feed centres where no danger of spread of noxious weeds could exist. The plan is receiving very serious consideration by elevator and packing plant men.

The Duster

A fellow who was stopping at the hotel over night rang for the porter in the morning and when he came up he asked him for a whip. The porter said: "What in the world are you going to do with a whip," and the fellow replied, "Well, I'm a little horse and the bed's a little buggy so I'm going for a little ride."

"Miss, your train is coming."

Precise passenger—"My man, why do you say 'my train' when you know it belongs to the company?"

Porter—"Dunno, Miss. Why do you say 'my man' when you know I belong to my wife?"

TO-DAY'S BEST STORY

Angry mistress discovering that breakfast table has not been set to her liking: "Did you lay that table, Bridget?"

Domestic: "Oi did mum, all except th' eggs."

"I don't see any mosquito netting around," said the vacationist who had just arrived at Swampville.

"No," answered his host proudly, "we're using mouse-traps."

Rufus Redd Dogg

"I see be th' paper," remarked Rufus as he refilled his clay and settled himself more comfortably in his favorite corner at the grocery store one evening, "thet a couple o' acquaintances o' mine—Misther and Missus Albert A. Saskatchewan, who wuz marrit way back in th' spring ther' at Ottawa hed hed a child thet wuz stillborn 'n thet wuz t' hev' bin' called Wheatboard ef he'd a lived. Th' b'reaved parents ed-mit thet et wuz premature but I'm thinkin' mese'f th' you-geenics wuz all wrong fr'm th' start. They sure wuz a bit previous any-ways in lookin' f'r a godfather before th' in'trestin' event transpired.

"Ef course, they notifies Ottawa thet wuz th' indirect cause o' th' tragedy 'n back cums th' wurrd, 'Is ther' anythin' we kin do?' Th' infant never hevin' even lived t' see th' light o' day et wuz a fat lot any-one cud do 'n et wuz only natcheral thet th' parents with thoughts o' what little Wheatboard might 'a meant t' them but especially to ther' bank accounts shud reply, 'Nuttin' kin be done. Thanks just th' same.' Why th' thanks, 'n why shud Albert A. an' his other half worry? Ther' young an' husky 'n long years afore them. I'm thinkin' though, ef they ever does hev another wan et 'll never be th' same ez th' fust. . . . . Giv' us a light, Dibby."

(From the Personal Column of the Squaw Creek Clarion).

Rufus Redd Dogg, who still owes us for last year's subscription, aims to spend a couple of days at the big Exhibition in Toronto. We reckon this is about all Rufus will spend.

THE MANUFACTURE OF

Grain Elevator Machinery

requires years of experience. We have made the equipment for over 3000 Elevators, which are scattered all over the three Western Provinces.

Our Elevator Service Department

is up-to-date and at your disposal.

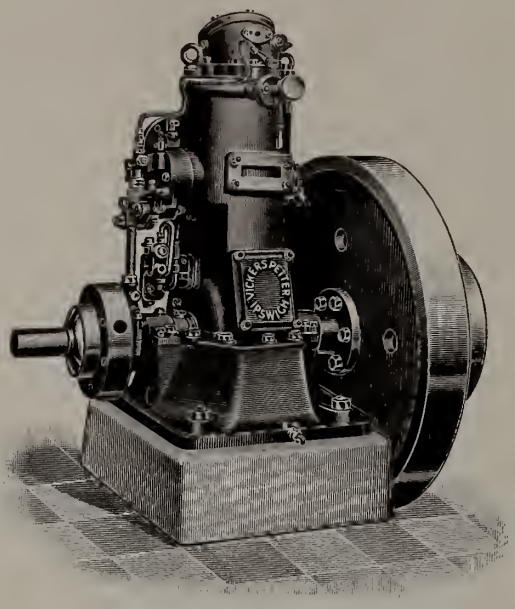
□

The VULCAN IRON WORKS, Limited

WINNIPEG

Vickers-Petter Oil Engines

(PETTERS' PATENTS)



FUEL ECONOMY

Petterize Your Power Problems

WE GUARANTEE THAT the VICKERS-PETTERS CRUDE OIL ENGINE will not exceed:-

FUEL CONSUMPTION .5 of a pint per B.H.P. per hour.

LUBRICATING CONSUMPTION .006 of a pint per B.H.P. per hour.

SPECIAL FEATURES

Will start instantly from cold.

Will run from no load to full load without any additional heating.

AVERAGE PRICE OF CRUDE OIL ANYWHERE 10c to 12c per gallon.

Full particulars on request.

Manufactured by

Vickers-Petters Limited,
Ipswich, England

Canadian Representative:-

R. S. GRIFFITH, 225 Beaver Hall Hill - MONTREAL

CANADIAN
Milling & Grain
JOURNAL

VOL. III MONTREAL, SEPTEMBER 15th, 1922 No. 16

Robin Hood Mills
LIMITED

ROBIN HOOD
TRADE MARK

MILLERS OF
High Grade Western Canadian
SPRING WHEAT FLOUR

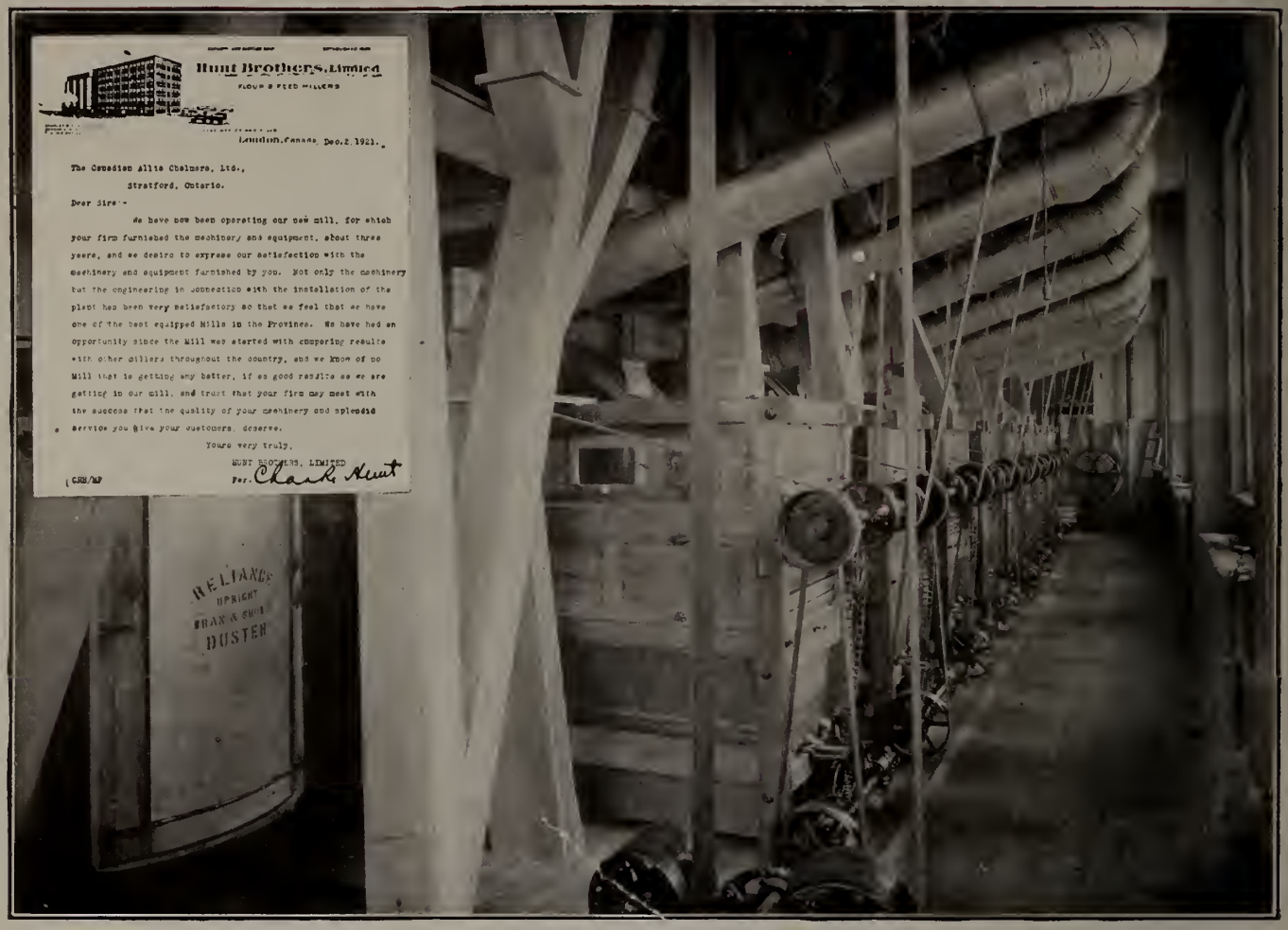
Mills and Western Offices at
MOOSE JAW, SASK.
CALGARY, ALBERTA

Combined Daily Capacity
5,000 BARRELS FLOUR
1,500 BARRELS OAT-MEAL AND ROLLED OATS

Highest Quality
ROLLED OATS and OATMEAL

Eastern Sales Office:
MONTREAL, *Canada*
Cable Address: "Fabean"

Read Hunt Bros. letter regarding their Mill after three years continuous operation.


Hunt Brothers, Limited
FLOUR & FEED MILLERS
London, Canada, Dec. 2, 1921.
The Canadian Allis Chalmers, Ltd.,
Stratford, Ontario.
Dear Sirs:-
We have now been operating our new mill, for which your firm furnished the machinery and equipment, about three years, and we desire to express our satisfaction with the machinery and equipment furnished by you. Not only the machinery but the engineering in connection with the installation of the plant has been very satisfactory so that we feel that we have one of the best equipped Mills in the Province. We have had an opportunity since the Mill was started with comparing results with other millers throughout the country, and we know of no Mill that is getting any better, if as good results as we are getting in our mill, and trust that your firm may meet with the success that the quality of your machinery and splendid service you give your customers deserve.
Yours very truly,
HUNT BROTHERS, LIMITED
per. Chas. Hunt
RELIANCE
DUSTER

PURIFIER FLOOR IN HUNT BROS.' 1,200 BBL. MILL AT LONDON, ONT.

MAY WE HAVE THE PLEASURE OF INFORMING YOU OF THE SUCCESS THAT OTHER MILLERS ARE HAVING WITH OUR :: :: EQUIPMENT :: ::

CANADIAN ALLIS-CHALMERS LIMITED

STRATFORD, ONTARIO

The Strong-Scott Mfg. Co., Limited, Winnipeg, Man.

WESTERN REPRESENTATIVES

GUTTA PERCHA & RUBBER, LIMITED
TRADE P.M.S MARK
TORONTO, CANADA

"The Buyers' Guide"

This familiar trade-mark is a reliable, trustworthy guide for buyers of belting. By it you may instantly identify "P.M.S.", the belting that has established an enviable record for efficiency. "P.M.S." gives superior adhesion to pulleys, even pliability, great strength, and resists the effects of heat, cold and moisture. Its comparatively low first cost makes it particularly worthwhile trying out in your plant.

Manufactured Exclusively by

Gutta Percha & Rubber, Limited

Head Offices and Factories, Toronto

Branches in all Leading Cities of Canada

The St. Lawrence Flour Mills Co.

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CANADA'S MOST MODERN AND BEST EQUIPPED MILLS
MAKERS OF CANADA'S MOST POPULAR BRANDS OF FLOUR

Regal

A high quality bread flour sold in bags of 7, 14, 24, 49 and 98 lbs. and in barrels of 98 and 196 lbs.

Quotations on car lots requested.

Fleur de Lis

A high grade bread flour sold in 98 lbs. bags and in 98 and 196 lbs. barrels.

The baker's favorite from Coast to Coast.

Offices & Warehouses: 1110 NOTRE DAME STREET WEST, MONTREAL, CANADA

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ARE your Flour Bags made in Canada? Canadian Flour should be packed in Canadian Containers. Have you seen the Lincoln Improved Flour Sacks? If not, we will gladly send you samples.

All Rope Flour Sacks
Cream, White Coated and Blue Lined

Car Lining Paper

Samples and Prices gladly sent on request

LINCOLN MILLS LIMITED.
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Sales Office, 43 King St. West, Toronto

PEDLAR'S CORRUGATED IRON SIDING

REDUCES CONSTRUCTION AND MAINTENANCE COST

If you are contemplating any reinforced concrete construction it will pay you to investigate Pedlar's "Perfect" Steelcrete, the ideal expended metal reinforcing. Write for our complete Reference Catalog illustrating our full range of "Perfect" Sheet Metal Products for modern fire-proof construction.

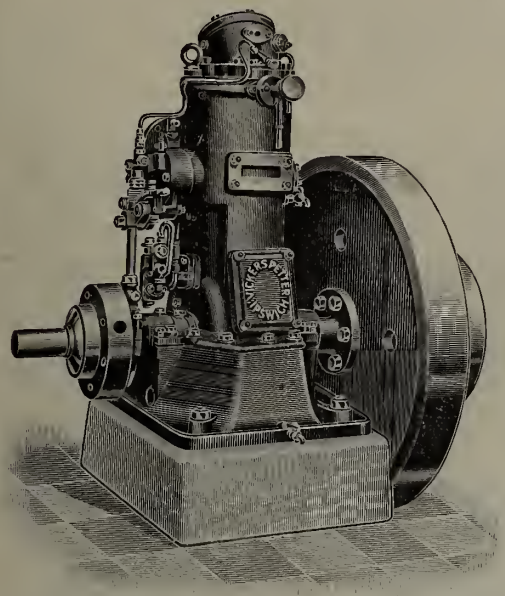
The Pedlar People Limited

(Established 1861)

Executive Office and Factories:—OSHAWA, Ont.
Branches:—Montreal, Quebec, Halifax, St. John, Ottawa, Toronto, Winnipeg, Calgary, Vancouver.

Vickers-Petter Oil Engines

(PETTERS' PATENTS)



PETTERIZE your POWER PROBLEMS

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Grain Trimming and Bagging

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Milling Engineers

Designers, Builders, and Furnishers of Flour, Oatmeal, Cereal and Feed Mills, Elevators, etc.

Cereal Packaging Plants a Specialty

Roll Grinding and Corrugating
Oxy Acetylene Welding
Machine Work and General Repairs

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The Bauer

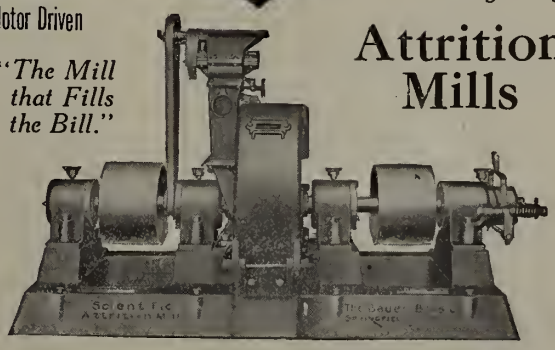
COSTS LESS PER HOUR

Belt and Motor Driven

Ball-Bearing Heavy Duty

Attrition Mills

"The Mill that Fills the Bill."



The Bauer Ball-Bearing Belt-Driven Attrition Mill

There is no good reason for experimenting with Grinding Machinery or grinding methods. Neither method results in profits. Are you sure that you are making ALL the profit possible? Why not put the problem up to the Bauer Engineering Department? This service is FREE to ALL millers. Take advantage of it.

Send for Catalog.

THE BAUER BROS. CO.

544 Bauer Bldg., Springfield, Ohio, U.S.A.

Makers of Bauer Attrition Mills, Corn Crackers, Cake Breakers Centrifugal Reels, etc.

Western Canada Flour Mills Company

LIMITED

HEAD OFFICE - TORONTO, ONT. N. Y. OFFICE - ROOM 1001. 44 WHITEHALL ST. NEW YORK
CABLE ADDRESS:—"LAKHURON"

MILLERS OF SELECTED HARD SPRING WHEAT FLOURS

Brands:—"PURITY" "THREE STARS" "BATTLE" "MAITLAND"

WINNIPEG MILL

Daily capacity 10,000 bbls. Flour.
" " 1,000 bbls. Rolled Oats.

100 Interior Elevators Throughout Canada's Famous Wheat Belt

25 H.P. Link-Belt Silent Chain Drive Operating Cleaner Legs

EFFICIENT POWER TRANSMISSION

Link-Belt Silent Chain is the popular means of transmitting power in modern grain elevators and flour mills today. Leather belts require long centers, and tight contacts with pulleys resulting in journal friction and dangerous sparking. Gear drives require fixed short centers, and cannot be run at the high speeds often necessary for grain elevator and flour-mill machinery. With Link-Belt Silent Chain you can use the centers that are most desirable in your plant, and transmit the power without slip or loss.

Let our engineers show you how Link-Belt Silent Chain drives can increase the efficiency of your plant. Write for our Grain Handling Plant Drive Book No. 309.

CANADIAN LINK-BELT COMPANY, LIMITED

TORONTO - WELLINGTON & PETER STS.
MONTREAL - 10 ST. MICHAEL'S LANE

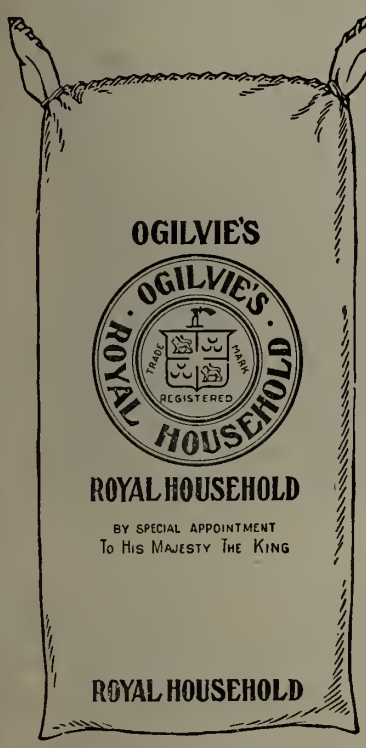
LINK-BELT

BY SPECIAL APPOINTMENT
TO HIS MAJESTY THE KING

THE OGILVIE FLOUR MILLS CO.

LIMITED

HEAD OFFICE: MONTREAL, CANADA



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ROYAL HOUSEHOLD

and

GLENORA

which are everywhere acknowledged to be

CANADA'S BEST

— MADE BY —

The Largest Millers In The British Empire

FORT WILLIAM MILLS

Mills at : MONTREAL, FORT WILLIAM, WINNIPEG, MEDICINE HAT

Daily Capacity, 22,250 Barrels

Established 1854 Cable Address: HUNTMILL

Capacity 1200 barrels daily

HUNT BROTHERS
LIMITED

Head Office and Mills
LONDON CANADA

MILLERS OF
Manitoba Spring Wheat Flour
Ontario Winter Wheat Flour

Hunt's Flour "Becomes a Habit"

The Reason Why!

Morse Silent Chain Drives

Operate in practically all Grain Elevators and Flour Mills in Canada is because of their Frictionless Rocker Joints. Oil Baths not necessary.

Immediate deliveries.

Write for Catalogue.

Jones & Glassco, *Reg.*

St. Nicholas Bldg.
MONTREAL
Bk. of Hamilton Bl'g.
TORONTO

LAKE OF THE WOODS MILLING CO., LIMITED,

MAKERS OF

MANITOBA SPRING WHEAT FLOUR

GUARANTEED

NOT BLEACHED *NOT BLENDED*

MILLS AT KEEWATIN, PORTAGE LA PRAIRIE, MEDICINE HAT

CAPACITY 13,700 BARRELS DAILY

HEAD OFFICE, MONTREAL WESTERN OFFICE, WINNIPEG

LOCAL OFFICES:—
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CABLE ADDRESS:—"HASTINGS," MONTREAL. CODES:—A. B. C. 4th & 5th EDITIONS, 1901, RIVERSIDE

112 RECEIVING ELEVATORS IN MANITOBA, SASKATCHEWAN AND ALBERTA, CAPACITY 3,500,000 BUSHELS.
TERMINAL ELEVATORS AT MILLS, CAPACITY 1,500,000 BUSHELS

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Pneumatic Conveyors

Reduce Your Labour Cost

This type of plant will remove practically all grain contained in a freight car or ship's hold **without** trimming.

FLEXIBILITY
Can reach any point desired.

EFFICIENCY
Shows a ratio of 70% to 80% as compared with bucket elevators.

ECONOMY
No waste.
Saves dock and demurrage charges.

ERECTION
Plants constructed for any capacity or situation.

MANUFACTURED BY

ROBT. BOBY LIMITED,

Bury St. Edmunds - Suffolk, England.

Canadian Representative:
R. S. GRIFFITH, 225 Beaver Hall Hill, Montreal.

GRINDING
made
Profitable

use a
MOORE GRINDER

Owners of our Grinders say they find their power costs less than with others and that they have no trouble —the running heads cannot get out of tram.

For quick service send us your Corrugating - - - Grinding - - - Repairs

Some Refitted Grinders in Stock

MOORE BROS.

Manufacturing Machinists, Power, Transmission & Supplies

61-65 Nelson St. - TORONTO

CARTER DISC SEPARATOR

Absolutely cleans wheat or oats to No Dockage

and Reclaims Wheat from Screenings

Increase the Test Weight of Wheat

The scouring action of the discs revolving through the grain rubs off the fuzz. This raises the test weight about one pound per bushel. Many elevators put their wheat through a Carter Disc Separator simply to raise the test weight. Of course, the oats are removed at the same time.

Try the Carter at our expense

We will ship you a Carter Disc Separator suited to your needs with the understanding that if, after a reasonable trial, it is not satisfactory to you in all respects, you may return it at our expense. You can't lose on that proposition—*unless you neglect to act on it.*

The Strong-Scott Manufacturing Co., Ltd.

"Everything For Every Mill and Elevator"

WINNIPEG, MAN.

EASTERN AGENTS - - - - - Can. Allis-Chalmers, Ltd., Stratford, Ont.

1920 was a good year

1921 was a better year

1922

Will be a bumper year for Canada's Milling and Grain Handling Industries

Don't you want to get in line early for your share of this trade?

You will probably get some but you will certainly get more if you advertise in

CANADIAN MILLING & GRAIN JOURNAL

Rates on application.

Dubrule Bldg. - Phillips Sq.
Plat. 1983 Montreal, P.Q.

The -- Priceless -- Thing --

Some millers will buy so-called Receiving Separators, Scourers, Packers, etc., that are little more than outward resemblances of the real article.

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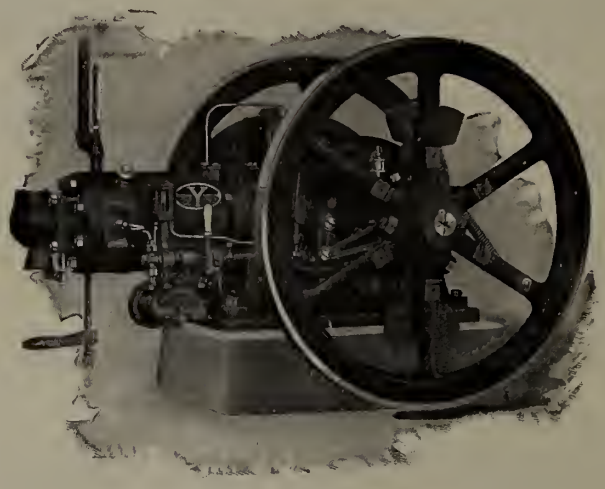

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VOL. III MONTREAL, SEPTEMBER 15TH, 1922. No. 16

CANADA'S ONLY MILLING AND GRAIN PAPER

Millers' Annual Meeting

IT has been definitely decided that the Second Annual General Meeting of the Canadian National Millers' Association will be held on Friday, 22nd inst. in the Oak Room of the Windsor Hotel, Montreal. As will be found in our news columns page 17, an interesting program has been arranged for the occasion, indeed, it may be said that the Montreal directors of the Association intend to leave nothing undone to make the occasion of the meeting a memorable one for members attending.

As in the case of the first general meeting of the association which was held in Toronto last year, the meeting will be open to non-members of the association. As a matter of fact members of the association are requested to bring non-member miller friends with them in order that they may learn what has been accomplished for the trade during the second twelve months of the association's existence.

Canadian Milling & Grain Journal expresses the hope that the attendance at the meeting will be a bumper one. There is not a man in business anywhere who is interested in his business who cannot afford for one day in the year at least to get away from the scene of his daily labors and reap the advantages that are unquestionably to be gained by association with his competitors.

To outside millers who are hesitating between attending the meeting and staying away the word is COME. They should not wait to find out what so-and-so or the other fellow is going to do but regard the success of the meeting as being dependent upon their individual efforts.

Nor need there be any fear of suffering discomfort through over crowding. The association is quite prepared to secure larger quarters if the space secured should prove inadequate.

The secretary of the association, Mr. F. C. Cornell will, on request be pleased to make reservations for visiting millers and to furnish any information desired regarding hotel rates or transportation matters.

That "Price-Cutting War" Yarn.

THE financial page of a Montreal afternoon newspaper lately carried a story to the effect that the recent cuts in the prices of the different grades of spring and winter wheat flour were due to the competition of British millers. It was made to appear in the article in question that Canadian millers would meet cut for cut in order to check their said to be declining flour export business with Great Britain.

The real facts of the case completely disprove any idea that there is a "throat cutting price war" being waged between Canadian and British millers or that Canada is sending less flour to Great Britain.

In the first place the decline shown in the price of cash wheat since the beginning of August has been more than ample to justify the price reductions recorded and the first of which was not made effective until long after the falling wheat market had set in.

As for a declining flour export business with Great Britain, exports of Canadian flour to Great Britain have this year been approximately 1,000,000 barrels in excess of last year's figures and this, strange to say, despite the efforts of the British milling industry to reduce importations of Canadian flour into their country.

Canada's export flour trade with Great Britain shows no sign of diminishing. As in the case of all other exportable commodities there are of course times when the flour export business not only with Great Britain but with other countries as well is quiet. But that Canadian millers will continue to improve their position in the British market is a certainty.

Incidentally, if some of those millers who are continually, in good seasons and bad pulling a poor mouth regarding foreign competition generally, quit their grouching, got down to real business and tried to meet competition in their own country they would have neither the time nor the occasion to complain.

Poor Milling and its Causes

ASK a competent miller why so many of the smaller millers find it hard to dispose of their products and eventually fall by the wayside, and in ninety-nine cases out of a hundred he will say, without hesitation, that poor milling is responsible.

Poor milling is not due to any one cause. There are many reasons. Lack of equipment and out of order machinery may be taken together as one of the most outstanding. Lack of ability on the part of the miller, shortsightedness on the part of the owner or owners who will not put or keep their mill in shape, poor wheat, uneven run of wheat, and a few more reasons might be mentioned.

Small millers might just as well face the facts first as last and admit that if they are going to keep in the game they will have to do very much the same as others in their line are doing. It makes no difference whether the mill is 50 or 500 barrels

G-O-O-D M-I-L-L-I-N-G unremittingly and unwaveringly must be the perpetual slogan.

It is often the case that as soon as trade becomes good, customers satisfied, and there is no complaint regarding the quality of the flour, that many small millers begin to slack off feeling that they are past all danger from complaint. This is a grave mistake for no matter how content the trade may be millers should never slack off but should keep everlastingly striving to find their weaknesses and, having found them, to correct them.

Millers and Millwrights

UNTIL one-man street railway cars were actually put into successful operation in certain Canadian cities there was a prevailing belief that a good conductor could not become a good motorman or vice versa.

The same idea seems to apply regarding millers and millwrights. There are some who maintain that a man cannot be a good miller-millwright, that he must be one or the other.

But why should not a man be a good miller-millwright if he has had experience in both lines? What is there to prevent a normally intelligent man from being able to learn how to make a flow and put up a piece of mill spouting as well?

Miller-millwrights are useful men in either capacity. The knowledge of milling gives a millwright better judgment in designing the correct degree for various stocks while his millwrighting experience makes him a great deal more valuable in running a mill if he is a good miller as he can make his own changes. Again, should the miller-millwright eventually become a superintendent he is more capable of directing the work of changing than one who is not.

Wages and Living Costs

MANY proponents of the living wage theory in Canada argue for its adoption on a humanitarian basis urging the desirability of a higher standard of living among the lower-paid classes of employees. Such instincts are doubtlessly praiseworthy, but what are the possibilities of attainment? Assuming any sum as the total from all industries of the country in the year, it follows, necessarily, that wages above a just proportion paid for the sake of humanitarianism to the employees of one industry must come out of the wages of the employees of other industries at the expense of humanitarianism.

If any such theories were to be applied how could anyone expect that such wage costs would not have to be recouped from the prices paid by the consumer, and if the costs to the consumer are to be correspondingly increased how could anyone expect that there could be reductions in the cost of living?

A careful distinction must always be made between the relation of wages to the cost of living and the so-called "living wage" principle. This latter is a vague term, meaning a different thing to each of many minds. The relation of wages to the cost of living is a definite statistical problem. At the present time, the best method of computing it is by the budgetary plan in which all significant conditions peculiar to this or that locality are given due consideration. Even though, however, this method of research is stumbling and faulty, with care an approximation to accuracy can be obtained. To determine a living wage by this method is not only impractical but impossible.

Other Points of View

MUST MAINTAIN REPUTATION

Fort William Times-Journal.—With the present high rate of duty on Canadian wheat the United States dealers will not buy Canadian wheat outright, unless it is urgently needed for their own home consumption, and the shipments made via United States channels for export are all made in bond, under conditions that should render the identity of Canadian grain inviolable, from Fort William, the final point of inspection, to the old country markets.

Under present conditions there are times when American grain goes to the seaboard through Canadian channels and Canadian grain will pass via the United States routes. This inter-change of service has been of mutual benefit in the past, but it cannot be allowed to work to the detriment of the standing of Canadian inspection certificates abroad.

It has been one of the features of our system upon which Canada has prided itself that the Fort William inspection stood at its face value anywhere in the world. Anything which cheapens this reputation must be avoided.

NO NEED FOR AN ALLIANCE

Le Soleil: Why should the King Government seek an alliance with any party when it holds a majority in Parliament and in the country? What the King Government is aiming for is national unity, harmony and a good understanding throughout the Dominion in order that it may carry out the great and patriotic program that the people have charged it to accomplish. Mr. King is ready to extend a hand to all who will join with him in working for the welfare of the country. Whether they are drawn from the ranks of the Progressives or the Conservatives, sincere patriots will find the most cordial welcome from the Liberal party, which has undertaken to bring back to Canada stability, prosperity and social and national peace.

THE DEATH OF A NATION

Hay Trade Journal.—Inertia and listlessness as to the country's welfare and preservation are the first low notes in its requiem. We have no brief for perpetuity if we disregard our duty. We cannot pass to coming generations the bell of liberty if its tones sound a dirge. If we fail to go ahead and build a greater nation of world-wide influence, with the opportunities before us now, it will be the fault of selfish class aims and ambitions, on the part of those who have not realized the end of the path they walk.

A PECULIARITY OF BIGAMISTS

Buffalo Commercial.—The peculiar thing about a bigamist is that he generally hasn't enough to support one wife, let alone two.

Eastern Provinces

MONTREAL

Dubrule Building
Phillips Square

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MONTREAL SEPTEMBER 15TH, 1922

THE MONTREAL MARKETS

Flour.—Notwithstanding the considerable cut recently made in prices for spring wheat grades of flour, there is still an unsettled condition prevailing in the market and further cutting is said to be imminent, consequently trade continues to be somewhat irregular, but in spite of this fact there is a steady demand for supplies from most sources, and a very fair volume of business is being accomplished in car lots of first patents at $6.80, in second patents at $6,30, and in strong bakers at $6.10 per barrel in jute bags, ex-track, less 10c per barrel for spot cash.

A fair amount of business is also reported in winter wheat grades of flour, there being a steady demand from local buyers, and as the offerings on spot have been none too large to meet the requirements prices have been maintained with sales of broken lots of choice grades at $5.20 to $5.30 per barrel in second-hand jute bags, and winter wheat patents at $5.50 to $5.60 per barrel in new cotton bags, ex-store, while car lots of choice grades sold at $4.80 to $5 per barrel in second-hand jute bags, ex-track. The demand for white corn flour is quiet at $4.40 to $4.50 per barrel in jute bags, delivered to the trade.

Grain.—The enquiry from English importers and New York exporters for Manitoba spring wheat continues good, and owing to further declines in cash prices in the Winnipeg market local exporters have been in a position to accept a few orders for No. 1 Northern for early shipment, but the prices bid by foreign buyers for October-November loading are still below working basis, and the orders in the market from New York could not be accepted, consequently the trade on the whole has been quiet.

Millfeed.—The condition of the market for millfeed has been unsettled and prices for bran and shorts in carload lots are reported to have been cut as much as $2 to $3 per ton in some instances, but notwithstanding this millers have made no further change and report a fair amount of business passing in Manitoba bran at $21, and in shorts at $23 with middlings selling at $28.25 per ton, including bags, ex-track. The trade in rolled oats has been somewhat quiet and prices for standard grades are unchanged at $2.90 to $3 per bag of 90 lbs.

Baled Hay.—There has been practically no change in the condition of the market for baled hay, prices being steady with a fair trade passing for local account, and this, coupled with the shipments that are being made to Europe on consignment is keeping the market well cleaned up of supplies. On spot sales of car lots of good No. 2 timothy are being made at $18 to $19, No. 3 timothy at $16 to $17, and clover and clover mixed hay at $12 to $13 per ton, ex-track.

INTERESTING PROGRAMME ARRANGED FOR MILLERS 2nd ANNUAL MEETING

In accordance with plans prepared by the board of directors of the Canadian National Millers' Association, the 2nd annual meeting of that organization will open in the Oak Room of the Windsor Hotel, on Friday, September 22nd inst., at 10 o'clock.

The morning session which is to conclude at 12.30 p.m. will be followed by luncheon, while the afternoon session lasting from 2 to 3.30 o'clock will be followed by an inspection of the harbor of Montreal as the guests of the Montreal Harbor Commissioners. The trip will be made aboard the Commissioners tug the "Sir Hugh Allan."

The day will conclude with a banquet in the Windsor Hotel at which Hon. J. A. Robb, Federal Minister of Trade and Commerce and himself a miller by profession, Hon. T. A. Low, and Mr. George H. Clark, Commissioner, in charge of the Feeding Stuffs Act under the Dominion Government, will deliver addresses.

DR. ROBERT MAGILL

Re-elected secretary-treasurer by acclamation of the Winnipeg Grain Exchange for the year 1922-23.

GRAIN HANDLING IN RECORD TIME

Winnipeg.—Four days from Regina to the lake terminals is the record being made in moving grain out of the West this fall.

This is considered absolutely the record for the freight movement of 740 miles. One day is the shortest possible time in which a car of grain can get through the Winnipeg yards and be properly inspected. Two to three days is the usual time but the rush now is to get the stuff down the lakes and the greatest possible speed is being made.

It was because of the increased delay of a sample market that this form of inspection was never put into force though provided for by law. Railways and grain shippers claimed the new system would glut the yards at a time when it was imperative that grain be moved expeditiously.

NEW BRUNSWICK PROTESTS ROUTING OF CANADIAN GRAIN VIA PORTLAND, ME.

St. John, N.B.—Strong protest against the discrimination being practised in favor of Portland, Me., against St. John by routing Canadian export traffic through this United States port over a Canadian Government-owned railroad was voiced by Premier Walter Foster, during the course of a reply to a toast at a banquet recently in the Union Club given by the St. John Board of Trade in honor of the visiting delegates to the annual convention of the Maritime Board of Trade.

Hon. Foster quoted from the report of the Senatorial report on the inquiry into these conditions to show that if the Canadian Pacific Railway could handle nearly fifteen million bushels of grain through the Port of St. John for the year 1919-1920, that the Government-owned Canadian National Railway could carry through a similar program.

Other speakers at the banquet were Hon. A. B. Copp, Secretary of State; E. M. MacDonald, M.P., of Pictou, N.S.; Hon. Dr. J. B. M. Baxter, M.P.; O. Turgeon, M.P.; R. B. Hanson, M.P.; R. W. Grimmer, M.P.; Hon. Fred McGee, M.L.A.; J. Troy Holman, President of the Maritime Board of Trade; E. W. Stairs, President of the Halifax Board of Trade; Captain J. E. Masters of Moncton; and Commodore J. L. Stewart, of Chatham.

Mr. MacDonald made a strong plea for a united front and was supported by the speakers following him. He advocated the obtaining the services of a freight rate expert who could study the matter in its entirety and see where discrimination was being practised.

OBITUARY

Toronto.—A life-long resident of Port Dalhousie is dead in the person of George Abel, aged 57 years. Mr. Abel years ago was a master mariner, but had for the past 22 years held the position of engineer at the Maple Leaf works at Port Dalhousie.

The death occurred recently at Clarksburg, Ont., of Mr. Walter L. Tyson, in his 77th year. The deceased gentleman was well known in milling and grain trade circles. He was for a number of years the proprietor of the Beaver Valley Flour Mills, Clarksburg.

FLAX GROWING FOR FIBRE IN CANADA SHOWING CONSIDERABLE PROGRESS

That Canada has made very considerable progress in the growing of flax in recent years, is indicated in the interim report of the chief officer of the division of economic fibre production of the Dominion Experimental Farms, covering the year 1920-21.

The ideal conditions for the growing of flax are a moderate and temperate climate, coupled with the humid breezes, such as are usually encountered in the proximity of a water coast. During the last few years, experiments have been carried on to determine which districts of Canada are suitable for flax fibre culture. These experiments have shown that the fibre obtained from flax grown on the experimental farms in the western part of British Columbia, in Ontario, the valley of the St. Lawrence, and the Maritime Provinces, is first-class in quality, comparing favorably with the best grades of Irish and Belgian fibre. Especially gratifying is the fact that spinning tests have proved that from Canadian fibre can be manufactured the finest linen damasks.

Although the division is only in its sixth year, through its recommendations, advice, seed-distributions, and work generally, the Canadian grower of flax has doubled the acreage under flax for fibre each year until, at the time of the report, there were thirty-two acres cultivated in the country to every one cultivated in 1916. By its system of testing, the division has been able to give much valuable information relative to pulling, deseeding or scutching. In the report, exact details are given of the work accomplished.

Among other things, it has been proved that flax-growing in Northern Ontario with profit is commercially possible. Variety tests, scutching tests and manurial tests have been carried on at various points, along with retting experiments; and a system of grading has been adopted for the benefit of distant purchasers, who can thus buy the quality desired without personal inspection. Canadian flax seed is now shipped to Ireland in some quantity, and the division receives cablegrams from the Irish Department of Agriculture outlining conditions and prices, which, without loss of time, are dispatched to flax-growers, spinners, and to any one interested in the production of flax for textiles.

THE CHICAGO MARKETS

The following table compiled from figures furnished by Messrs. Logan & Bryan, members of the Winnipeg Grain Exchange and the Chicago Board of Trade, C.P.R. Telegraph Chambers, Montreal, show highest price levels recorded on Chicago Board of Trade from Aug. 28, 1922, to Sept. 11, 1922, inclusive.

	Aug. 28	Aug. 29	Aug. 30	Aug. 31	Sept. 1	Sept. 2	Sept. 4	Sept. 5	Sept. 6	Sept. 7	Sept. 8	Sept. 9	Sept. 11
September Wheat	1.03 7/8	1.03 3/8	1.01 1/2	1.01 1/4	1.01 1/8	1.00 5/8		0.99 3/4	1.00 1/4	1.00 5/8	1.02 1/8	1.01 3/8	1.01 1/2
December Wheat	1.04 7/8	1.04 5/8	1.02 1/2	1.02 3/8	1.02 1/8	1.02 5/8		1.02	1.02 3/8	1.02 7/8	1.03 1/2	1.02 1/2	1.02 7/8
May Wheat	1.09 1/2	1.09 3/8	1.07 1/2	1.07 3/8	1.08	1.07 7/8		1.07 1/2	1.07 3/4	1.08 1/8	1.08 5/8	1.07 5/8	1.07 3/4
September Corn	0.61 1/8	0.60 5/8	0.59 1/2	0.59 1/2	0.60 3/4	0.60 3/4		0.61	0.61 7/8	0.62 1/4	0.62 1/2	0.62 1/2	0.62 7/8
December Corn	0.56	0.55 1/4	0.54 1/2	0.55	0.56	0.56 3/8		0.57 3/8	0.57 5/8	0.58 1/2	0.58 1/2	0.68	0.58 1/4
May Corn	0.59 3/8	0.58 7/8	0.57 1/2	0.58 1/4	0.59 1/2	0.59 3/4		0.60 7/8	0.61	0.61 1/4	0.61 5/8	0.61 3/8	0.61 5/8
September Oats	0.32 1/4	0.32 1/2	0.32 1/4	0.32	0.32 1/2	0.32 3/4		0.34 1/4	0.34	0.35 3/8	0.35 3/4	0.35 1/4	0.35 5/8
December Oats	0.34 1/8	0.34 1/2	0.33 7/8	0.33 5/8	0.34 1/8	0.34 1/4		0.34 7/8	0.34 3/4	0.35 3/8	0.35 3/4	0.35 3/8	0.35 1/2
May Oats	0.37 5/8	0.37 5/8	0.37 1/4	0.37 1/4	0.37 7/8	0.37 3/4		0.38 1/4	0.38 1/8	0.38 1/2	0.38 3/4	0.38	0.38 3/8
September Barley	0.52 1/4	0.52	0.52	0.52	0.53 1/2	0.54		0.54 1/2	0.55 1/4	0.55 1/2	0.56	0.56	0.52 1/2
December Barley	0.53	0.53	0.55	0.53	0.52	0.54		0.54 1/2	0.55 1/2	0.55	0.55 3/4	0.55 3/4	0.55 1/2
September Rye	0.69 1/4	0.68 3/4	0.67 5/8	0.67 1/4	0.67 1/8	0.67 1/2		0.67 1/2	0.67 3/4	0.68 5/8	0.71 1/4	0.71 1/2	0.71 3/4
December Rye	0.72	0.71 1/4	0.70	0.69 3/4	0.69 1/2	0.69 1/2		0.69 1/4	0.69 3/4	0.70 1/4	0.71 1/4	0.71 3/4	0.71 7/8

Labor Day. Board of Trade closed.

Ontario

TORONTO

TORONTO SEPTEMBER 15TH, 1922

THE TORONTO MARKETS

Flour.—The most recent feature of the local flour market has been the drop of forty cents a barrel in price. Spring wheat grade first patents is now down to $6.80, with second patents at $6.30. Flour has declined a dollar a barrel within the month past. As far as the export market is concerned very little business is passing, but those mills that have been making low prices during the past two or three weeks are now inclined to stiffen their quotations, but buyers do not show any disposition to meet them. The domestic enquiry is good but the bakers are only buying for immediate requirements and still have their eyes focussed on ninety-cent wheat as the point at which to buy. Ontario winter wheat flour is not offering any too freely and there is very little enquiry for the product. Apparently the low prices that are indicated for new crop Manitoba flour has upset buyers' calculations for Manitoba has been quoted as low as 32 shillings ($7.36), and that is all the buyers have been cabling on winters, while a price of 33 shillings and 6 pence ($7.70) is required. Domestic enquiry for winter wheat flour has fallen off somewhat and most of the buyers appear to be loaded up. On the possibility that flour prices will be further reduced foreign importers are hesitating and millers are anticipating a lower market, provided no decisive change in wheat prices for the better takes place. At any rate they appear to be taking the attitude that nothing can be gained by buying ahead.

Millfeeds.—The millfeed market is quiet and prices have again sagged. Bran is now quoted at $21.00 and shorts at $23.00, delivered. White middlings are selling at $29.00 and feed flour at $1.75 per bag. Some of the smaller mills are quoting lower prices than these. These is plenty of cheap oats available now, together with other coarse grains, and mills are running steadily producing large quantities of feed. Not a few of the mills are selling to the United States in order to get rid of their stocks and find a fairly ready market in that quarter, despite the customs handicap.

Grain.—The millers of Ontario continue to buy wheat on the hand-to-mouth basis, due largely to the spread between cash and option prices which is too wide yet, in spite of the process of narrowing down which has been going on lately. Arrivals of new Western wheat at bay ports are light as yet and very little trade is passing in Western oats, although odd cars of corn are finding fairly ready sale. New cash No. 1 Northern wheat is being quoted at around $1.41½ while No. 1 old is down to about $1.21½ and No. 1 at $1.11. Generally speaking, grain values have not moved to the liking of the agricultural interests of the country, there having been a steady downward trend since the season opened. The movement of the new crop in both Canada and the United States is increasing and this, combined with a light demand from the importing countries, has tended to weaken the market.

Oil Meal.—The oil meal market is a little easier, $45.00 now being quoted in carload lots at the mills. The demand is picking up for fall feeding although up to the present the market has been very dull owing to the large quantity of coarse feeds available. Dealers say that the outlook for fall business is very promising.

Cereals.—There is practically no export enquiry for cereals and the domestic demand is slow. Domestic quotations for rolled oats are from $3.00 to $3.10 per ninety-pound sack, with oatmeal ten per cent. higher.

REVISED PACKING DIFFERENTIALS

The following schedule of revised package differentials which are effective as from September 1, cancels schedule of September 15th, 1921. The basis per barrel is 98's jute.

Barrels	65c	per	barrel	over	basis
Half Barrels	1.20	"	"	"	"
98's Cotton	10c	"	"	"	"
49's Cotton	20c	"	"	"	"
24's Cotton	35c	"	"	"	"
14's Cotton	70c	"	"	"	"
12's Cotton	60c	"	"	"	"
10's Cotton	1.00	"	"	"	"
7's Cotton	1.00	"	"	"	"
6's Cotton	90c	"	"	"	"
7's Paper	40c	"	"	"	"
140's Jute	5c	"	"	under	"
Jute Covers	25c	"	"	over	"

SAYS NEW GRAIN CONTAINS MUCH DIRT

Fort William, Ont.—Owing to the fact that the grain inspection department is not marking new grain to distinguish it from last year's crop, no accurate figures are obtainable as to the number of cars of new wheat which have arrived here this season, but elevator men state that a few cars of new wheat are in the houses here, though the majority of the grain so far received is rye. What new wheat has come down here is very dirty and is graded "rejected." The wheat itself is of very high grade, being Number One and Two Northern, but from five to twenty per cent. of foul seeds, principally wild oats, is contained in most of it. Most of the grain is from southern Manitoba, where the land has become overrun with weeds. It is expected that cleaner grain will come from Saskatchewan.

MILL MACHINERY FOR SALE

The undersigned are open to receive offers for the purchase of equipment of a flour blending plant, either in whole or in part, to close out an estate now in liquidation. Further particulars can be obtained from

THE STERLING TRUSTS CORPORATION

12 KING STREET EAST TORONTO

GRAIN SHIPPING IN BULK

Vancouver.—Nearly 175,000 bushels of wheat were shipped from this port to Japan, in bulk, recently. This was the first shipment to go there from Vancouver not shipped in the usual way. This cargo was sent there more as an experiment. The cargo, when it reached Japan, was carried ashore by coolies in large baskets. It is reported that this new method of unloading proved so economical that Japanese importers have decided to have future cargoes sent across in bulk, using the above method for unloading. Vancouver is rapidly becoming a large grain-exporting port. The past year about seven and a half million bushels of wheat were shipped to foreign countries; 4,000,000 bus. went to Great Britain and the balance principally to Japan. This was a great increase over previous years' shipments, and prospects of heavier shipments will have the effect of attracting more boats there for cargo business. Business men are urging Canadian government to increase storage capacity in order to take care of the prospective shipments for the coming season.

HANDLED 400,000 BUS. PER DAY

Over twelve million bushels of grain, constituting an increase of more than a million and a half bushels over the preceding month, were shipped to Montreal via the Lachine Canal during the month of August. The total for the month was 12,200,329 bushels, which compared with that of 10,638,909 bushels in August of last year, represents a gain for the month reviewed of 1,561,420 bushels. The principal increase was in wheat, of which commodity 9,087,621 bushels came down the canal last month, as against 6,662,593 a year ago. Oats increased from 592,190 bushels in August, 1921, to 916,663 in August, 1922, and barley from 138,897 to 601,386 bushels. A gain was also reported in flaxseed, shipments of this variety totalling 68,676 bushels last month, compared with only 15,000 a year ago. Both corn and rye, however, showed a decrease, shipments of the former dropping from 2,918,266 bushels in August, 1921, to 1,290,284 during the same month this year, while rye dropped from a total of 311,963 bushels a year ago to 235,699 in August, 1922. A considerable amount of flour, 31,500 sacks and 500 barrels, was shipped last month, as against none for the same month last year.

FLOUR EXHIBITS AT NATIONAL SHOW

Toronto.—The Ontario milling and grain trades were well represented in striking exhibits at the Canadian National Exhibition this year. Among the firms having exhibits in the new Pure Food Building and the Arena Building were the Maple Leaf Milling Co., Limited, Toronto, who had a fine display of Monarch and Maple Leaf brands in charge of Mr. F. McLaughlin of the West Toronto mill, the Stratford Milling Co., Ltd., and the McLeod Milling Co., Ltd., of Stratford. Purity Flour was also attractively displayed and many of the biscuit and cake manufacturers had effective exhibits.

Mr. F. H. Peck, Montreal manager for the Maple Leaf Milling Co., Ltd., was a recent visitor in Toronto.

Mr. J. S. Barker, vice-president of the Maple Leaf Milling Company, Ltd., is back at his desk in Toronto after an enjoyable holiday at Muskoka.

The Modern Sophocles

TO be really interested in a hobby is to have a latch key to Eden, to the place where man worked for pleasure not for punishment.

The man with a hobby can slip away in a moment from the grind of doing what he MUST to the delight of doing what he LIKES.

A hobby is the greatest known mental and nervous safety valve. The man who possesses it has a treaure of infinite value to his health, and to his happiness—and to his business success.

It is a failing in modern life that we have too few hobbies; that we concentrate too much on business and replace recreation with distraction.

We have lost the fine art of enjoying ourselves.

WESTERN BANKERS ADVISE GRAIN GROWERS NOT TO WITHHOLD WHEAT

Winnipeg.—A warning to farmers of Western Canada not to speculate by withholding their wheat from the market in the hope that prices will advance, was the reply of Winnipeg bankers recently, when interviewed regarding the latest proposal of Premier Charles Dunning, of Saskatchewan.

Premier Dunning, following his proposal of some little time ago, that a bankers' conference be held to consider ways and means of helping the farmers to realize the utmost from their crops, has suggested that the bankers should "extend portions of amounts due them from all creditors to enable more gradual liquidations."

Local bankers interviewed, professed that they failed to comprehend just what the premier's proposal really meant. They presumed, however, that the Premier would have the banks step aside while the farmers settled their accounts with other creditors, postponing the payment of their debts to the banks.

The bankers strongly urged the farmers to sell at the prices prevailing when they are ready to market their crops, and emphatically opposed the holding of the wheat for higher prices which might not materialize. No one could predict the trend of prices, and furthermore, prices were not controlled here, but in the big grain markets of the world, where the supply and demand could be studied.

"The plan, if put into effect, is not likely to gain anything for the farmers. You can't shake the financial arrangements of the entire west in this way, you know," one banker said. "If the farmer needs money he can always obtain an advance from the commission man."

MR. C. B. WATTS INJURED IN ACCIDENT

Toronto.—Friends of C. B. Watts, secretary and manager of the Dominion Millers' Association, Royal Bank Building, Toronto, will regret to hear that he was the victim of a motor accident in France recently. Mr. Watts was injured by being struck by a passing automobile and although his injuries were not serious he was laid up for a time. Mr. and Mrs. Watts have been touring in Europe and are expected to sail for home shortly.

Western Provinces

WINNIPEG

WINNIPEG SEPTEMBER, 15th. 1922

THE WINNIPEG MARKETS

Flour.—The flour mills of Western Canada are very active at the present time and are running to capacity, and many of the small country mills that have been closed down for some time are now running full blast. There is an excellent demand for Manitoba spring flour from both domestic and export sources, and the general outlook for a substantial volume of business is very bright. The declining wheat market during the past two weeks has been reflected in flour prices, and has resulted in a further drop of 30c per barrel. Flour pricecs are now down to practically pre-war levels and have established confidence to dealers who are now placing their orders in larger volume than has been their habit of late, and they are showing every inclination to get away from the hand-to-mouth method of doing business. While it is anticipated that wheat prices may work somewhat irregularly lower during the heavy movement, the material change is not expected to be large and will not affect flour prices to any appreciable extent, which are now thought to be around rock bottom. Prices are quoted as follows: For delivery at points between Fort William and the Saskatchewan boundary, top patent springs $6.70 bbl., jute; seconds at $6.10 and first clears at $5.50, mixed cars, 30-day terms; cotton, 10c over this basis. Saskatchewan and Alberta points are 10c under Manitoba, and Pacific Coast points 30c to 50c over. Bakers and other car-lot buyers are given a special discount from these prices.

Millfeed. — An excellent demand continues throughout Western Canada for millfeeds and although the mills are manufacturing heavy they are finding no trouble in disposing of this commodity. There has been no change in prices, and bran is selling at $20 per ton, in mixed cars with flour, and shorts at $22, in bags, delivered Winnipeg territory.

Oatmeal.—This market has not been very brisk but is showing signs of improvement as the enquiry is good. There has been a reduction in price of 20c since last report. Good brands of rolled oats are selling at $2.50, in 80-lb. cotton bags, and oatmeal at $3.05, in 98-lb. cotton bags, delivered, Winnipeg territory.

Rye Products.—There is not much change noted in the rye flour situation. The demand is reported to be very ordinary, while prices remain firm and practically unchanged.

Flax Seed.—The demand for linseed cake and meal is showing a little improvement, but the business being done is not large, while at the same time there is an excellent demand for oil and trade volume is fairly large. Prices have continued steady, but very firm, and are slightly higher than at last report. Present quotations are $52 per ton for cake and $54 for meal. Raw oil is quoted at $1.25 per gallon, and boiled at $1.28.

THE GRAIN MARKETS

Wheat.—The wheat market has shown considerable activity during the past two weeks and although, for the time being, prices were depressed by the weight of heavy receipts, the unfavorable break in weather conditions, which will undoubtedly delay harvesting operations, caused prices to stiffen somewhat in anticipation of a lighter movement of the crop. On September 2, October wheat closed at 95⅜c, the lowest closing price for the nearby future since the war, but with the aforementioned break in the weather, causing "shorts" to become more active in their buying operations, a stronger tone appeared in the market, and on September 7 the October option closed at 96½c.

NORMAN L. LEACH

A past president of the Winnipeg Grain Exchange, recently elected member of the Exchange Council for 1922-23.

Barley.—There has been a good demand for all grades of barley, exporters claiming that bids have been in line daily and that more could be worked if stocks were available.

Flax.—Canadian crushers have been taking the odd cars of this cereal as they came upon the market, but the light stocks are against active trade.

Rye.—A good active business has been going on in rye daily, exporters being the chief buyers.

Port Arthur, Ont.—Among the equipment of the new Parrish & Heimbecker elevator here are two No. 10 Style "B" Monitor steel-covered Warehouse and Elevator Separators and one No. 6 Style "A" Monitor steel-covered Screenings Separator.

WANTED—Scalping Reel, also a four or six roller chopping mill. Reply John N. Storry, Washago, Ont.

HEAVY GRAIN MOVING DEMANDS BEING WELL HANDLED BY RAILWAYS

Winnipeg.—Heavier marketing and loading of new season grain for the past three weeks than for any other corresponding period since 1916 is reported by Canadian Pacific officials.

Special preparations were made some weeks in advance to move this year's crop. For this purpose cars and locomotives which for most part had been lying idle for months had been inspected, but in shape and distributed at the loading points throughout the west, engines and box cars from the eastern division transferred to the west to meet the demands of the peak movement, while regular rolling stock of the company had been increased by 3,500 new hopper-bottomed box cars, bringing the total of this class of equipment to 85,000 cars. With the exception of a car-load here and there no shipments of grain are being made from Saskatchewan points, according to Mr. B. T. Chappell, general superintendent of the Canadian National Railway, Saskatoon, in Winnipeg. Exporters are worried regarding the large percentage of wheat arriving from southern Manitoba, which is rejected on account of weeds and there is now being urged by the grain men the necessity for a really active campaign to attempt eradication of weeds. Thistle, mustard, tumble weed and wild oats were favored by cyclonic storms early in the season, which cut down the grain and gave them a great start. The result is that all these are rampant, and if some strenuous effort is not made to check them they are liable to spread at an alarming rate all over the province.

C.N.R.'S SHARE OF WESTERN GRAIN TRADE

Winnipeg.—With an approximate value of $150,000,000; 116,000 cars of grain were handled by the Canadian National Railway from western points between September 1, 1921, and August 28, 1922, according to Mr. A. E. Rosevear, general freight agent, who said the present season's movement had jumped from an average of 100 cars daily to 350, comprised mainly of shipments from Manitoba.

Three-quarters of the wheat of the Canadian West continues to be carried on United States railways. All the sacrifices that Canada has made to complete the construction of three transcontinental railways do not appear to have achieved any very great results in this matter of wheat transportation.

TRADE OPPORTUNITIES

With a view to assisting the Canadian milling trade in the development of a permanent and profitable export business, "Canadian Milling & Grain Journal" publishes in each issue a selected list of trade opportunities, the investigation of which should prove of value. "Canadian Milling & Grain Journal" is taking special pains to ascertain the reliability of each opportunity presented and will gladly furnish any further information regarding them that may be desired.

THE EDITOR.

No. 281.—Messrs. Cole & Company, Ltd., P.O. Box 205, Bridgetown, Barbados, would like to secure representation for a Canadian flour exporter. This firm also handles feedingstuffs.

No. 282.—Messrs. Mowat Bros., 21 Hope St., Glasgow, Scotland, wish to get into communication with Canadian exporters of oatmeal. The firm is well organized for the transaction of export business.

No. 283.—The West India Sales Company, 40 west St., New York City, exporters and importers and manufacturers' representatives, are desirous of obtaining an agency in Trinidad, British West Indies, for a Canadian flour mill. Communications on the subject should be addressed to the company's New York office. The company is also prepared to represent in the British West Indies Canadian exporters of oats and oilmeal. Excellent references furnished.

MILL FOR SALE

Combined Flour Mill and Elevator fully equipped with modern machinery, situated in the City of Regina, capacity of 150 barrels per day, access to all railways. Will sell on reasonable terms.

For further particulars apply

BOX 74 REGINA, SASK.

THE WESTERN MARKETS

The following report furnished by Messrs. Baird and Botterell, 103 Grain Exchange, Winnipeg, shows daily highest price levels from Aug. 28, 1922, to Sept. 11, 1922, inclusive.

	Aug. 28	Aug. 29	Aug. 30	Aug. 31	Sept. 1	Sept. 2	Sept. 4	Sept. 5	Sept. 6	Sept. 7	Sept. 8	Sept. 9	Sept. 11
October Wheat	1.00⅝	1.00¼	0.99	0.97⅜	0.96¾	0.96½		0.96⅝	0.96⅞	0.97¼	0.98	0.97	0.97⅛
December Wheat	0.98½	0.98¼	0.96¾	0.95¾	0.95⅝	0.95⅛		0.94⅞	0.95⅜	0.95⅝	0.96¼	0.95¼	0.95¼
May Wheat	1.03⅜	1.03⅛	1.01⅞	1.00⅝	1.00⅞	1.00⅛		1.00	1.00⅝	1.00⅝	1.01½	1.00⅜	1.00½
October Flax	1.81⅞	1.84	1.84⅞	1.83½	1.84	1.84		1.86	1.95	1.95½	1.97½	1.92½	1.93¼
December Flax	1.72¾	1.74½	1.75	1.73½	1.73¾	1.74¼		1.74¾	1.81⅝	1.81½	1.84½	1.78¾	1.97¼
October Rye	0.67	0.67	1.81¾	0.65⅝	0.65¾	0.65⅝		0.65½	0.65¾	0.66¾	0.68¾	0.68½	0.68⅞
December Rye	0.65½	0.65¼	0.66	0.63¾	0.64⅝	0.65½		0.64⅛	0.64¾	0.65	0.66½	0.66½	0.66¾
October Barley	0.52½	0.52½	0.64⅛	0.52	0.52⅛	0.52¼		0.52⅜	0.52¾	0.53¾	0.53⅞	0.53⅝	0.53⅞
December Barley	0.50⅝	0.50½	0.51¾	0.49⅝	0.49⅞	0.49⅝		0.50⅛	0.50¾	0.51½	0.51½	0.51⅛	0.51½
October Oats	0.40	0.39⅞	0.39½	0.39⅜	0.39⅜	0.39¼		0.39⅝	0.39⅝	0.40⅝	0.41⅞	0.41⅛	0.41¾
December Oats	0.38⅛	0.38⅜	0.37⅝	0.37⅝	0.37⅞	0.37¾		0.38⅛	0.38⅛	0.38½	0.39¼	0.38½	0.38½
May Oats	0.41⅞	0.41⅝	0.41½	0.41¼	0.41¼	0.41⅛		0.41¾	0.41⅞	0.42½	0.42⅞	0.42⅛	0.42⅛

Labor Day. Exchange closed.

Foreign Flour and Grain News

OWING to recent substantial reductions in prices, inquiries from British and other overseas buyers of spring wheat flour have been more satisfactory. First patents are half a dollar a barrel lower than two weeks ago and eighty cents per barrel over the quotation prevailing one month ago. That the Canadian export flour business is being steadily maintained despite some dull periods is evidenced by the fact that during the past year exports to Great Britain are approximately one million barrels in excess of the figures for the year previous.

Second patents are at present offering at $6.30 and stronk bakers' at $6.10, in jute bags, ex-track, with the usual discount for spot cash.

Winter wheat flour prices have also undergone a revision since last report and are now quoted at $5.20 to $5.30 for choice grades, patents at $5.50 to $5.60, and car lots of choice grades at $4.80 to $5.00 per barrel.

The grain market has been somewhat more active, falling prices having brought an improved demand for Manitobas for near and future shipment.

AUSTRIA.—The cereal crop is not a large one this year, although the quality is reported to be good.

CZECHO-SLOVAKIA.—In spite of unseasonable weather conditions, a good average wheat crop is still anticipated. The total cereal outturn this year will, nevertheless, be appreciably below that of 1921, although an excellent potato crop will, it is considered, largely offset the deficiency.

JUGO-SLAVIA.—The long period of dry weather has caused serious deterioration to the wheat crop, while the outlook for maize is also distinctly less promising.

RUSSIA.—Latest advices speak unfavorably of the wheat crop in the Crimea and in the Ukraine, while mention is also made of damage by locusts in the Volga. Active preparations are being made to augment the grain acreage next season.

GREAT BRITAIN.—The production of wheat in England and Wales for 1922 is estimated by the British Ministry of Agriculture to be 63,040,000 bushels from an area of 1,969,000 acres. This estimate is 6,736,000 bushels less than the estimated production last year.

The area sown to barley was reported as 1,362,000 acres and the yield as 40,720,000 bushels, compared with 42,472,000 bushels last year. The oats area was given as 2,161,000 acres and oats production as 74,320,000 bushels, compared with 80,264,000 bushels last year.

NORWAY.—A proposal was advanced at a recent Norwegian Cabinet meeting for a State Monopoly of all grain and milling products imported to and sold in Norway. The monopoly would not include the milling of grain but would make compulsory the purchase of all Norwegian grain by the State.

The grain is to be sold by the State at the same price to all purchasers and the State is to buy at the retail price charged by grain businesses for milling products. Further, the State is to pay all inward freights.

It is not proposed to establish the monopoly as an independent company but as a State concern with a Budget which is to be laid before the Storthing.

SWITZERLAND.—The wheat outturn is privately forecasted at 400,000 quarters, compared with 650,000 quarters last year. Rye, meslin and spelt, although comparatively better than wheat, are also appreciably poorer crops than in 1921.

ARGENTINA.—Fine, dry weather has been prevailing, and no immediate return to unseasonable conditions is considered probable. Under these circumstances it is presumed that the crop outlook is satisfactory, the more especially as a full acreage has been sown to wheat.

AUSTRALIA.—Fair rains have fallen in New South Wales, where the wheat crop has so far made slow progress, owing to drought. Elsewhere the crop is reported to be progressing favorably.

INDIA.—Fair to good rains have fallen in the extensive wheat growing areas of Northern India, and observers confidently anticipate good seed-beds in the autumn. The latest message from the Viceroy, however, mentions a pronounced break in the Bombay monsoon.

FRANCE.—Unsettled, stormy weather was experienced recently, and some local damage was caused by floods. Generally, however, the harvest has received no serious check, and in many of the Southern and Central departments cutting has now been completed. Wheat is an exceptionally fine crop in the Beauce, Vendee and Allier this year, but taking a general view of the situation the yields are appreciably below those of 1921. Estimates of the total wheat outturn vary between 30 and 35 million quarters, as compared with 41,000,000 quarters the final estimate of last year. Secondary cereals are still the subject of very favorable comment.

GERMANY.—Havy rain and hail have caused considerable damage of late to crops in the centre of Germany. The latest official report on the crop situation states that the condition of both Winer wheat and rye was slightly lower on that date than at the commencement of the previous month.

BRITAIN AND WORLD GRAIN TRADE

London.—The Times in a recent issue says London is regaining its pre-war position in the world's grain trade. A large business has been done here lately for Greece, Italy, France, Belgium, Holland and Germany, this being mainly owing to the favorable terms the London merchants are able to offer. The result is the strengthening of London's position as the principal centre for tonnage and the chartering of vessels, bringing additional business to the banking and insurance companies.

Elevator, Mill & Personal Notes

Welland, Ont.—Temporary quarters have been arranged in M. Beatty & Son's plant here by the Dodds Canadian Iron Works, Ltd., which has been incorporated with a capitalization of $200,000 to engage in the manufacture of flour mill machinery. The Dodds Brothers have been engaged in the manufacture of flour mills in Decatur, Illinois, for about twenty years and the demand for their product has become so great in Canada, that it was necessary to install a plant here in order to supply the market.

Vancouver.—Vancouver is beginning to realize that more grain elevators are needed, if the port is to hold the grain export trade secured last year. Between September 1st, 1921, and the present, 7,552,044 bushels have been shipped from the port, compared with only 460,000 bushels the previous twelve months. To carry away this amount of grain 80 ships, each taking 3,000 tons, must be employed. The elevator at Vancouver will hold 1,250,000 bushels, 37,500 tons, or roughly 12½ shiploads.

Cumberland, Ont.—Mr. H. Cardinal is contemplating the sale of his grist mill here.

Vancouver, B.C.—The Vancouver Milling & Grain Company, Ltd., has leased the old St. Francis Hotel for use as a warehouse and office.

Saskatoon, Sask.—The Quaker Oats Company moved into their new up-to-date offices here recently.

Fort William, Ont.—Seven thousand bags of cement, which were destined for use in connection with the addition to the N. M. Paterson Co.'s elevator here, were lost when fire recently destroyed Canadian Pacific Railway shed No. 3.

Saskatoon, Sask.—The entire interests of the Goose Lake Grain Co., Ltd., have been taken over by the Pioneer Grain Co., Ltd. The new acquisition gives the Pioneer Company a string of 30 houses and eliminates a company which has been operating in Saskatoon and district for upwards of 14 years.

Montreal.—The Matheson Lindsay Grain Company, Ltd., has been incorporated with capital of $500,000.

Regina.—Some 350 country elevators are now in readiness to handle the season's business for the Saskatchewan Co-operative Elevator Company. Several new elevators have been constructed during the summer. A small quantity of grain has already been delivered to the elvators.

Winnipeg.—Some idea of the high grade of this year's wheat crop can be gained from the fact that out of 246 cars received here in one day recently, 159 graded No. 1 Northern, 13 No. 2 Northern and 8 No. 3 Northern.

Vancouver.—Work is to be started immediately installing additional cleaners at the government elevator here. This improvement to the grain handling equipment of the port is the result of petitions and requests extended last year to the government by the grain brokers and the Vancouver Merchants' Exchange, and also is a recognition of the fact that Vancouver is an acknowledged door for export of Canada's western wheat crop.

Hon. J. A. Maharg was recently elected vice-president of the Saskatchewan Co-Operative Elevator Company, Ltd., in succession to Mr. James Robinson, who resigned.

Mr. W. R. Bawlf, president of the N. Bawlf Grain Co., Ltd., Winnipeg, heads the Winnipeg Grain and Produce Exchange Clearing Association for the ensuing year. Mr. C. C. Field is the new vice-president of the association.

Mr. J. McRea, of Regina, Sask., has been appointed manager for the current season of the Saskatchewan Co-Operative Co.'s house at Strasbourg, Sask.

Mr. Peter Brown, of Govan, Sask., is operating the Ogilvie Flour Mills elevator at Strasbourg, Sask., this season.

Mr. William Raisbeck, of Grassy Lake, Alta., is in charge of the United Grain Growers' elevator at that point this season. Last year Mr. Raisbeck was in charge of the Growers' Purple Springs, Alta., house for the season.

Hon. J. A. Robb, Federal Minister of Trade and Commerce, returned to Ottawa recently from a trip to England.

Mr. S. G. Grant, formerly inspector for the Alberta Pacific Elevator Company, Ltd., in Northern Saskatchewan, and who has been residing in Winnipeg, is moving to Humboldt, Sask., where he will in future make his home.

Mr. L. C. Kennedy, of the Alliance, Alta. district, recently accepted a position as manager of the Federal Grain Co., Ltd., at Veteran, Alta., and is now residing there.

Mr. J. B. Musselman, secretary of the Saskatchewan Grain Growers' Association, has been appointed managing-director and member of the executive of the Saskatchewan Co-Operative Elevator Co., Ltd.

Mr. J. H. Morrison has been appointed to take charge of the Robin Hood Mills Company's mill laboratory work at Moose Jaw and Calgary.

Mr. James Wilson, of Messrs. James Wilson & Sons, cereals, Fergus, Ont., was a recent caller on Mr. W. C. Omand in the Royal Bank Building.

Mr. George Shirk, of Messrs. Shirk & Snyder, flour millers, Bridgeburg, Ont., was a caller at the grain room of the Toronto Board of Trade recently.

Mr. A. A. Watts, of New York, brother of Mr. C. B. Watts, manager of the Dominion Millers' Association, spent a few days in Toronto on his way back home after a vacation spent in Muskoka.

Mr. J. G. Wolverton, of the Wolverton Milling Company, Ltd., Wolverton, Ont., spent a few days in Toronto during the Exhibition.

Mr. H. L. Rice, of the St. Mary's Milling Company, was a recent caller on the Toronto grain trade.

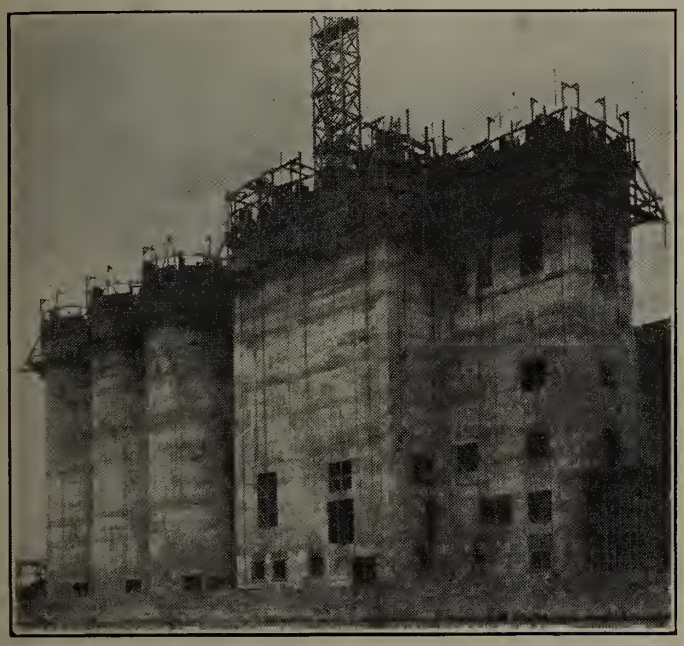
Mr. S. R. Stewart, formerly of the New Hamburg Milling Co., Ltd., was a recent visitor to Toronto.

Mr. M. F. Cohen, secretary-treasurer of the Sunset Feed and Grain Company, Buffalo, was a recent caller at the office of Messrs. C. R. Vannatter & Co., Ltd., Dominion Bank Building, Toronto.

The Elevator Operator

NEW PARRISH & HEIMBECKER HOUSE AT PORT ARTHUR, ONT., WILL HAVE INITIAL CAPACITY OF 350,000 BUS.

The new Parrish & Heimbecker elevator at Port Arthur, Ont., an illustration of which appears herewith is expected to be completed and in shape to handle its share of the new crop by October 15 next.



New Parrish & Heimbecker Elyevator at Port Arthur, Ont.

The plant which is a striking illustration of the use of concrete in elevator construction is being built by the Canadian Stewart Company, Ltd., which have put into their task the best of their extensive experience in this line of work.

The new house will have an initial capacity of 350,000 bushels, but provision has been made to increase this as the occasion arises to 1,350,000 bushels. The plant is equipped with two receiving legs, two, two thousand bushel scales and has been built to handle 60 cars per day. The house is on two lines of railway and will have a shipping capacity of 30,000 bushels per hour.

Messrs. Parrish & Heimbecker are located at 614 Grain Exchange Building, Winnipeg, and also maintain offices to serve their extensive interests in Calgary and Toronto.

GROWERS MARKETING MORE GRAIN

Winnipeg.—An increase of 15% in the quantity of grain marketed by farmers adjacent to the Canadian Pacific lines in western Canada during the last ten days of August over the quantity marketed during the corresponding period last year is reported by local officers of the railway.

Montreal is now the greatest grain exporting seaport in the world, possessing an elevator storage capacity of 11,500,000 bushels and facilities for the loading of 16 ocean steamers with grain at one time.

N. M. PATERSON COMPANY ACQUIRES 13 HOUSES OF YOUNG GRAIN CO.

Fort William, Ont. — Announcement has been made by Mr. N. M. Paterson, president of the N. M. Paterson Grain Co., Ltd., of the acquisition of thirteen country elevators formerly owned and operated by the Young Grain Company, of Winnipeg. The grain houses are all in southern Manitoba, in the vicinity of Deloraine, and their addition to the string of elevators operated by the Paterson Company brings the total of country elevators conducted by them throughout the west to ninety-five.

HEADS WINNIPEG GRAIN EXCHANGE

Winnipeg.—Mr. J. B. Craig, recently elected president of the Winnipeg Grain Exchange for the season 1922-23, by acclamation, was vice-president last year, and previously served on the council of the Exchange. He is president of the Central Grain Company, Limited, vice-president of the Mutual Grain Co., Ltd., and is a past-president of the Northwest Grain Dealers' Association.

Mr. J. A. Richardson, the new vice-president of the Exchange, and who was also elected by acclamation is western manager and president of James Richardson & Sons, Ltd., grain exporters. Mr. Richardson is also president of the Eastern Terminal Elevator Company.

The 1922-23 council of the Exchange comprises the following: Messrs. F. J. Anderson, J. E. Botterell, G. E. Carthcart, R. R. Dobell, R. I. Evans, C. C. Field, J. C. Gage, H. Ganer, A. M. Godfrey, C. H. Leaman, D. C. McLachlan, W. A. Murphy, D. N. Potter, C. Tilt, Donald Morrison, N. L. Leach, R. B. McClean.

J. B. CRAIG

Committee of Arbitration.—Messrs. T. Brodie, G. M. Heimbecker, D. N. Potter, D. C. McLachlan, J. A. Richardson, A. Thomson and A. P. White.

Committee of Appeal.—Messrs. F. J. Anderson, J. B. Craig, R. T. Evans, R. A. Dobell, A. K. Godfrey, J. C. Gage and H. E. Sellers.

$5 for a Letter

If the Canadian flour milling and grain handling industries are to mark progress in keeping with their importance it is essential that there should be greater co-operation between them and that the one should help the other in such a manner that by so doing they may help themselves.

There has been in the past, and there is still considerable antagonism between those who make flour and those who handle the basic commodity for the manufacturing thereof, and while it is in no sense to be regarded as a desire to fill space or as a matter of financial profit "Canadian Milling & Grain Journal," with the sole object of endeavoring to stimulate greater interest in the problems of flour milling and grain handling among practical millers, grain elevator operators, mill and elevator engineers, contractors, and transportation and grain exchange men who have to do with the handling of flour and wheat, will pay $5.00 for each accepted article concerning the manufacture of flour, the handling and the marketing of wheat, erection of flour mills and grain elevators, etc., with suggestions for possible improvement in any of the methods now being practised.

If You Are a Practical Miller:--

and have invented any "wrinkles" or ideas of your own for saving time or money in the operation of your mill, and in the manufacture of flour or feeding-stuffs;

or have any suggestions to make regarding improved methods of laying out machinery in flour mills, large or small;

or have discovered any new methods of cleaning or tempering wheat, or

If You Are a Grain Elevator Operator:--

and have any ideas regarding the better handling of grain, its loading into elevators or its discharging into grain boats;

or have any ideas regarding the better building or equipping of elevators,

Send Them In--

Articles dealing with the above or other similar subjects should be not more than 500 words in length and should be written on one side of the paper only.

Names of those whose articles are accepted for publication will not be printed unless desired.

Do not be afraid to send in your ideas or suggestions written in your own way. We will put them into shape for you without in any way altering what you want to say.

If you can send us a rough sketch of your idea all the better.

Address your contributions, or correspondence regarding any further particulars you may need as to above offer to

The Editor,

"CANADIAN MILLING & GRAIN JOURNAL,"
Dubrule Building,
Phillips Square, Montreal.

THE PRACTICAL MILLER

MILL TRANSMISSION SYSTEMS

By J. H. FLORA

"Canadian Milling & Grain Journal" gives herewith the second and concluding part of Mr. Flora's interesting paper, the first part of which appeared in our issue of September 1, page 28.—Ed. Note.

There are two disadvantages to the electrically driven plant. First, a heating plant must be run for the sole purpose of heating the mill. But this need be run only to heat the mill and to heat wheat. Secondly, trouble may occur on the transmission lines between the central station and the mill. With underground cables or twin overhead lines this trouble is very small.

I will give the matter of shafting very little time as the designer of a mill will calculate the proper size and support of shafting. If a shafting breaks under load it will usually be found that the shafting was out of alignment or sprung due to the heat of a burned out bearing.

Cause of Bearing Troubles

After the prime mover the matter of bearings may be considered the paramount factor of mill transmission for most of the power loss is due to the friction of the bearings. Everyone is familiar with the styles of the ordinary babbity bearings. The collar oiling bearing is the one to be depended on for mill work as there are no rings to stick and there is a supply of oil available in the oil chamber of the bearing. Outside of neglect and lack of lubricant, the cause of bearing trouble is due to poor fitting of the bearings. Bearings on roll journals would give very much more satisfactory services if each bearing were carefully scraped and fitted to the journal on which it is to be used. The different journals on the roll floor will vary in diameter due to wear and a bearing that fits one may not fit another. Careful fitting will keep the roll in tram while running, for the roll cannot slip away from the load. All other bearings should be well fitted to cut down friction and undue wear.

As the cost of coal goes up the ball bearing must be given very careful consideration, as the reduced friction will give a great saving in power. For instance, if the power cost of the production of a barrel of flour is 5 cents—and if a ball bearing equipped mill has a 15 per cent. power saving the decrease of cost of production will be ¾c per bbl., which at the end of the month will amount to a large sum. Besides this the better operation of the machines may result in a better product. Quite a number of millers will say that the ball bearings are not successful. This is partly true but is not the fault of the bearings. To begin with, the original cost of the bearings is rather high, and in order to get the customer to make the purchase the mill builder has in many cases thrown the bearings at the machine instead of installing them properly. This fault may partly be charged up to the ball bearing salesman who may have recommended a bearing which is too light for the use to which it is put, or which may be the wrong type for the place.

It must be borne in mind that a ball bearing is made of very hard metal and which will not stand a sudden jar or much distortion. When we stop to consider the distortion or squeezing out of shape of a ball bearing it will easily be seen that a ball bearing will carry the load on only one or two balls at a time. These balls must flatten to get enough bearing area to carry the load. Consequently, a large ball will more easily give a bearing area than a small one. Because of this fact a heavy load must be carried on a large size ball. This is especially true for the balls used for roll duty where the pressure is great.

Considering the jarring of a bearing load the result of a jar is an impact very much like the impact of a sledge hammer. The balls are so hard that they are brittle and the supports and housings must be so designed to give the bearing relief from the shock load. Also the housing should be constructed so that the bearing will not be squeezed or cramped under a load as the cramping will add to the pressure load already on the bearings and if the housing is heavy this cramping pressure alone may break the balls.

Another factor causing trouble in ball bearings is the lubrication. Ball bearings will not run forever without lubrication. A little fresh oil every week will not injure them and will insure that the lubrication will not be neglected altogether. Lubrication on a long period of six months or so may result in the lubricant leaking out of the housing unnoticed, which will result in a dry bearing. Again the lubricant may solidify and push out of reach of the bearings.

Lubricant Must be Acid Free

The lubricant for ball bearings must be acid and alkali free. The ordinary cup grease will not do, as it is lime-hardened and contains animal fat which is acid. The wear on the grease will either liberate the lime which forms a coating on the balls or the animal fat will turn acid, in either case the balls will corrode. The best lubricant is a good red engine oil held in the housing by flax packing. If the housing is not provided for packing glands a petrolateum or crude vaseline will give very good results. Years of wear with this lubricant will not corrode the balls and the wornout lubricant will work out of the housing along the shaft. Another word of caution is to keep all dirt and grit from the bearing. A ball bearing of proper adaptability and proper size properly mounted and cared for will give satisfactory service anywhere.

The question of belting is familiar to every miller and most millers agree that leather belts are the only belts to drive flour mill machinery, for if a machine chokes down and the belt slips the machine can usually be started before the life is all burned out of the belting. This is not true of cotton or fabric belting. Leather belts should be made endless by the use of belt glue. This gives a joint that does not jump when going around the pulley and which is as strong as the rest of the belt, if properly made.

Proper Belt Speed

The present tendency is toward the waterproof belt made with waterproof glue. At the present time this belt is but little more expensive than oak

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tanned belt. The speed of a belt should not be more than mile a minute, as the air cushion and centrifugal force holds the belt from the pulley. Where the drive is of large horsepower and there is a great distance between centers a rope drive of manila can be used to a good advantage. There are two styles of rope drives known as the American system and the English system. The American system is used in flour mills and consists of one endless rope threaded through all grooves of all sheaves and has the advantage that one driving sheave will drive more than one driven sheave.

Gears are used only where centers are so short that belting cannot be used. Gears are noisy and have low efficiency.

Where centers are too short to use a belt or rope drive and where considerable power is to be transmitted there are several makes of silent chain drive which are very good. These chains should be well cared for and lubricated, as the chains are very expensive.

THE REQUISITES OF GOOD FLOUR

The first requisite of good flour is good wheat, the procuring of which is left entirely up to the miller. The second is care in manufacture; that is to say, the wheat should go through a rigid process of cleaning and scouring before it goes to the rolls for grinding, commonly known as milling, into the final product. Here great care must be taken for the reason that the particles of bran, which are the hull or surrounding part of the heart of the wheat kernel, become discolored through exudation of the cellulose and the flour shows black specks. This freshly milled flour is a creamy color, thought to be due to carotin, which is the natural yellow pigment of plants, and is found to be unstable and capable of being decolorized by heat, light, and chemical reagents. This brings up the subject of curing.

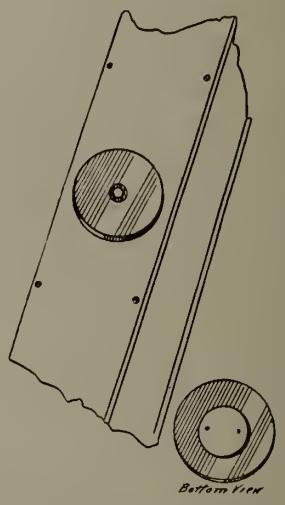
Bread Value of Freshly Milled Flour

It has been found by experimentation that the flour freshly milled has not yet attained its highest bread-making value; that is, it will not produce as large or as wholesome a loaf of bread at this time. But if the flour which has been carefully handled, cleaned and milled is left to the action of light, air and the changes incident to storage, the yellow coloring matter of flour dissolved with the oil is bleached by their agencies and the flour will approach its maximum bread-making value. The reason for this has never been determined, but it is an evident fact. This, of course, is the paramount idea in the manufacture and the demands of the consumers. The various shades and tints of flour serve as an index of bread-making values. Those of dark gray or slaty color are found to be poor in bread-making quality. However, this method of color test is not an absolute one, but generally flour not produced under ideal conditions of manufacture has a poor color, and if allowed to age or cure grows darker, hence, it is only the well-milled flour, from sound wheat that is improved by ageing or curing. This ageing method of storage, which requires from two to three weeks to gain the desired results, is known as the natural process of ageing flour.

Due to the enormous amount of space, care and time, required by this method, millers sought to find some better process of bleaching. About 1880 the first attempts were made, and a patent for a process was granted in Great Britain. This process was a chemical one which used chlorine. Later sulphur and ozone were used, but under these methods flour lost some of its bread-making value. No better way was found, however, until 1904, when Mr. J. N. Alsop, of Owensboro, Ky., finally discovered a method by which flour could be cured artificially, and as successfully as it is cured by nature. Mr. Alsop found that by the use of nitrogen peroxide, produced by the action of a flame electric arc on the nitrogen and oxygen of the air, he was able to bleach flour as did nature without reducing its bread-making value.

LID FOR HAND HOLES

In making a lid for a hand hole in a spout an excellent way is to cut the hole not quite in a perfect circle and screw the piece cut out to a circular piece



cut about 2 inches larger in diameter. By cutting the hole the least bit oval, the piece cut out after being fastened on the larger circle can be twisted when set in the hole making it hold tightly.

PLACING BELTS ON PULLEYS

The placing of small and medium sized belts on pulleys is very often a problem. Here is a method, however, which should be generally adaptable. With the pulleys standing still, particularly when the belts are rather light or when located in places where there is not much room, as between overhead pulleys, push the belt on to the pulleys as far as it will go. Then while holding the belt with one hand, use a screw driver or similar tool to assist in getting the belt over the edge of the rim, using the rim as a fulcrum. Each time the belt is lifted it can be pushed on to the face of the pulley and when the edge of the belt is over the rim it can be pushed into place, or by turning the machinery it will go into place itself.

THE CANADIAN NATIONAL MILLERS' ASSOCIATION

ROOM 204, CORISTINE BUILDING

MONTREAL, P. Q.

September 15th, 1922

Dear Sir:-

On behalf of the Board of Directors of the Association, we have much pleasure in extending to you an invitation to attend the Annual General Meeting which will be held in the Oak Room, Windsor Hotel, Montreal, on September 22nd next. The meeting will be called to order at 10.00 A.M.

A programme which will appeal to all millers has been arranged and the meeting will be open for a general discussion by all millers present, whether members of the Association or not.

While last year's meeting was a marked success, the programme for this year will be a decided improvement. We feel sure that millers who attended the meeting last year will be present, and we trust that those who have not yet accepted our invitation will this year make up their minds to set aside this date and arrange to forget their own troubles for one day's social intercourse with their competitors. This is also an opportunity to meet old acquaintances.

Please be good enough to advise us at your earliest convenience whether or not you will be present in order that we may make arrangements for suitable accommodation, etc.

Yours very truly,

F. C. CORNELL,

Secretary.

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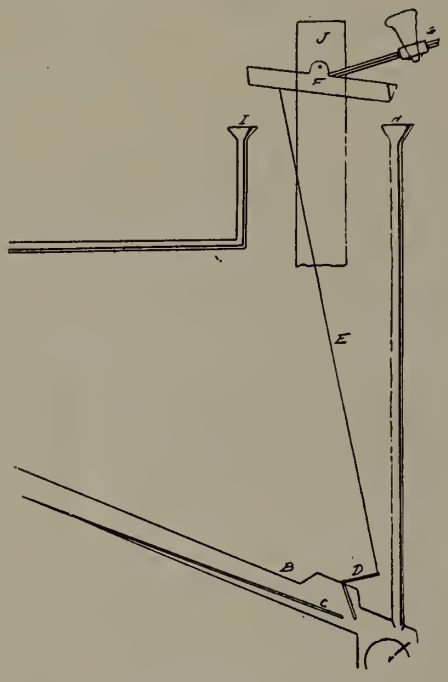
SAFETY WHEAT TEMPERING DEVICE

The idea pictured herewith is a safety device for millers using water in tempering wheat. The idea of having a safety device is to turn the water into the sewer, if for any reason, the wheat stops.

In the sketch, A is the conveyor, B wheat spout to the conveyor, C spout lining raised at lower end gate D to close against when the wheat stops. F is a V-shaped piece of tin fastened to support J, so as to swing easily, throwing the water either into H when the wheat is running, or into sewer I when the wheat stops.



E is a fine copper wire, which works automatically, pulling E down to H when D closes against C. G is the water from the tank or pressure hydrant. If water pressure is too high, run it into open trough so that it can be regulated more easily.

This device is very sensitive. if put up right. It can be regulated by adding weights on either D or F or by kinking or stretching the fine copper wire.

EXCESSIVE ROLL PRESSURE AND GLUTEN QUALITY

The question is often asked and seldom answered, if at all, what effect roll pressure would have on the quality of gluten. This is by no means an easy question to answer. Millers might make a lot of flour by employing heavy roll pressure, and then make another lot of flour from the same wheat under the same condition, except to lighten up on roll pressure, and they might, perhaps, find some difference in the amount of quality of the gluten. Chances are very good that the difference would be so small that they would be unable to say whether the difference was due to excessive pressure or some other cause.

It is certain that the flour down toward the tail of the mill is richer in gluten than the whiter and cleaner flour up near the head of the system, but it is also certain that this gluten is not of as good quality. In other words, all millers know that the flour made near the very tail end of the mill will not raise as well and make as light a loaf as flour further up in the system. The color of the bread made from this lower grade of flour shows that the flour contains offals (fine bran), so very fine that it has passed even through a No. 13 and No. 14 silk. This fine offal is very liable to kill the flour strength, due to having injured the gluten.

Value of Gluten

The question now is, is the gluten near the tail of the mill of less value, due to having been injured by heavy and repeated pressure, or is it naturally weaker due to having offals in it in larger quantity? Mill feeds, both the bran and shorts, contain gluten, but only due to the fact that these offals contain flour and the fact that shorts contain flaked flour is further evidence that gluten is present and in goodly quantity. Flakes are a sure indication that gluten is present, due to the fact that gluten is sticky and it pastes flour, bran and gluten into one mass, which means flakes. It is hard to believe that starch would flake and make such tough flakes as are found in some milling. Generally, when millers flake they send gluten to feed. At least, this is a common belief. But the fact that millers send gluten to feed should not cause lowering of the gluten remaining of that which is left in the flour, for it is hard to believe that they could flake the best of the gluten and send it to feed leaving the inferior gluten in the flour.

Summing this matter up, millers know that flakes contain gluten; that this gluten is lost to them; that excessive pressure creates heat and that heat is very liable to injure the gluten; that offals in flour hurt flour quality; that long unnecessary travel of stock reduces offals to powder which bolts into the flour; that dry brittle bran will pulverize easily.

How, then, is the miller to avoid these? If he will use corrugated rolls on his pure stock, all purified middlings and second middlings, he will avoid flaking and there is no danger of cutting up impurities. If the saw tooth non-cutting round top run dull to dull is used there is absolutely no danger of hurting flour, but a very large improvement can be made in the flour. Then, too, he can safely use middlings mills on fine middlings which are clean and avoid flaking. When middlings corrugations are used but little pressure is exerted on stock and no flaking and the same is true of the use of middlings mill. But the miller must have some smooth rolls. If he wishes to avoid flaking on these he simply puts on a two to one differential and the rolls will do more effective work with less pressure, less heat and less power consumed.

To avoid long travel of stock it is only necessary to cut out all unnecessary spouts and needless travel of stock. A simple flow means a flow that does not chase and scatter the stock from place to place and create attrition flour. If a miller has a flow that seems to have a lot of needless travel in it he should get rid of it. If he can't do it, he should get some one to help him.

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Flour which is made or middlings which are reduced to flour by the "sliding around in spouts" process is not good flour, because when middlings are reduced to flour by friction, feed is also reduced and the result is disastrous to the flour.

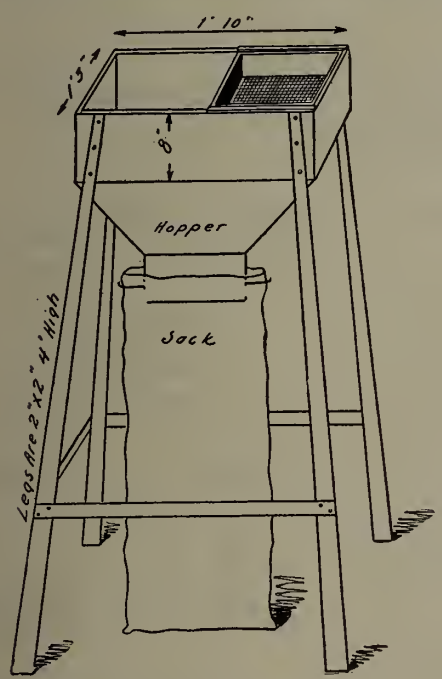
Make the Bran Tough

To prevent offals from cutting up and bolting into the bran, millers should make the bran tough. This is best done by wetting the wheat with water. The amount of water to use and how long to temper must be decided by the miller. He wants temper enough so that bran will be soft and pliable as it goes to bran bin instead of dry and harsh. The softest of wheat will be easier to mill if the bran is toughened.

This article is not written for the sake of individual benefit or pleasure, nor is it written for the mill doctor or for the mill builder. It is written for the benefit of the miller who is dragging along in the rear. Wake up and get in the game. If you can make your own repairs and changes in flow you are that much to the good.

SEPARATING TRASH FROM SWEEPINGS

The accompanying illustration represents a frame 1 foot 3 inches by 1 foot 10 inches and 8 inches deep, with a hopper underneath from which a sack is hung. There is also a small sieve 1 foot 1 inch by 1 foot 4 inches, made from 1 x 4 board, with quarter inch mesh wire cloth in the bottom. This sieve has 1 x 1 cleats on each side so that it can be slid back

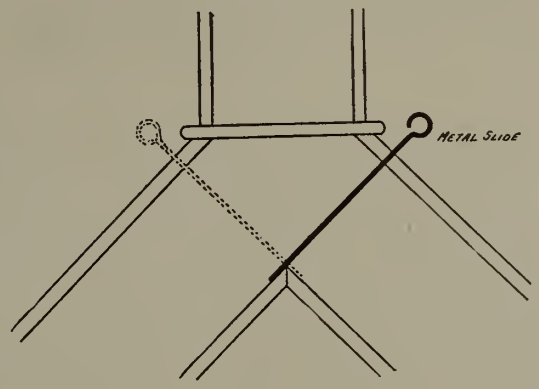


and forth in the frame by hand.

This arrangement will separate any trash from your sweepings before they are fed in. It will be found useful to have one for the flour on the packing floor and one for sweepings. When sack is full it can be fed into feed or to redresser without endangering the silk or killing somebody's stock.

A TWO-WAY VALVE

In many mills it is found necessary to change direction of streams occasionally. A simple two-way



valve for use in changing direction of stream is illustrated herewith. One metal valve is sufficient for each valve of this kind.

INSECT POWDER TO PROTECT GRAIN

There are already many hundreds of progressive millers and elevator men all over the country who have found insect powder a real money saver where used to protect their corn or grain while stored from damage by weevil. Best results can be obtained by sprinkling the floors and sides of the bin, in which the grain is to be stored, with insect powder. If there are many holes or openings a little larger quantity is necessary on account of the free passage of air.

Then a layer of grain about two feet high is put in and the layer sprinkled with powder; then another layer is put in and also sprinkled. This is kept up until the bin is full and then the powder is sprinkled around the bin. This procedure will protect the grain for a considerable period of time as the powder will retain its strength for several months. The insect powder can be easily sifted or blown from the grain when ready to use.

Insect powder is non-poisonous and will not harm the grain or any persons or animals that might eat it.

Insect powder will not only kill weevil, but is sure death for such other insect pests as flies, fleas, ants, mosquitoes, roaches, lice on fowls or stock and many other house and garden pests. It is absolutely harmless to domestic animals and man.

It is certain that the efficiency of a powder is reduced in direct proportion to the amount of inert material used in its preparation.

Don't overload belts, and run them as slack as possible, especially new belts. An excessive initial tension puts the belt under a severe strain that weakens it and takes away the elasticity.

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CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

ENERGETIC and thoroughly competent mill and sales manager, now in charge of 200-barrel mill in Western Canada, seeks responsible position with live Canadian milling company. Ten years road and sales experience with large Canadian mill. References furnished. Reply Box 120, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

SALESMAN AVAILABLE for the Province of Quebec. Excellent connections in Quebec City and district. Has had several years experience and has represented several leading firms. Can furnish best of references. Reply Box 114, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED — By Head Miller, with 20 years practical experience in modern Canadian mills up to 4,000 barrels capacity. Can guarantee best results as to quality and yield on both hard and soft wheat, and maintain mill at highest point of efficiency. At present in charge of a 1,000 barrel plant. Reply Box 85, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

WANTED by well-established milling firm in British Columbia experienced miller to operate 50-barrel Midget Marvel Mill and feed grinder. Applicant please state experience, giving references, and salary required. Reply Box 124, "Canadian Milling & Grain Journal," Phillips Square, Montreal, P.Q.

MILL FOR SALE

SEVENTY-FIVE barrel roller mill, modern machinery, separate elevator capacity 20,000 bushels. Flour warehouse, 60 tons capacity. Equipped with Chopper, Corn Sheller, and Oat Crusher. Electric Power. Reply Box 121, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—One 50-barrel Greey flour mill, 4 stand, 9 x 19 Rolls. Plansifter, cleaners, scourers, elevators, etc., all of which are in good condition. To be moved from building they now occupy. Reply Box 123, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

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MILLER is open for engagement of charge, in any capacity. Write full particulars. H. Marshall, 222 Wychwood Avenue, Toronto.

WANTED.—Ex-miller with long experience wishes to rent 25-40 barrel mill. Reply Box 125, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

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POSITION WANTED as head miller in a small or medium sized mill. Applicant has had twenty years' experience. Thirty-seven years of age. Reply Box 110, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED—Experienced miller, to take charge of mill in Western Canada. Give age, experience and references. Reply Box 122, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

WANTED immediately. Flour salesman for Eastern and Western Ontario. Will give liberal terms to right man, who must be able to secure quantity distribution with good record. Reply direct to the James Goldie Company, Ltd., Guelph, Ont.

FOR SALE — Flour mill machinery. Practical enough to fully equip small mill. All modern and in good shape. Attractive price. Reply Box 116-6, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

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SALES EXECUTIVE,

Several years experience as principal in Ontario and western grain business, also feed manufacture and distribution; thorough knowledge of French; conversant with grades, options, premiums, hedges, freights and carrying charges. Wants to connect with first-class grain or milling concern. Reply Box No. 115, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

POSITION WANTED—Miller, thirty-seven years of age, is open to take charge of small or medium-sized mill, or to take position as second miller in large plant. Has had twenty years experience. Thoroughly familiar with all branches of milling. Can furnish excellent references. Reply Box 107, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

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The Question Box

With a view to making this department one of real service, "Canadian Milling & Grain Journal" cordially invites its readers to send in their problems to The Question Box. There are but very few millers or elevator operators who do not have worries in the proper conduct of their plants. It may be due to lack of experience or inability to trace cause and effect. The logical and sensible thing to do is to ask someone who may possibly know. Often he is not at hand, and still oftener the perplexed miller or elevator operator does not want to show his lack of knowledge. Under these circumstances he can address his inquiry to the craft through this journal. His name will not be divulged if he wishes to remain incognito. Someone is sure to reply who has had similar problems to meet or similar questions to ask. We guarantee to devote all the space necessary to the asking and answering of questions, so do not be backward in sending them in. THE EDITOR.

QUESTION.—Where should the brush machine be used in a line of cleaners?

ANSWER.—When convenient brush machine should be used just after single scourer and before wheat goes into tempering conveyor, and then again after double scourer just before going into grinding bin. However, this would necessitate a brush machine of larger capacity so as to handle enough wheat for mill, or else two machines.

QUESTION.—We are thinking of installing some tempering bins 54 inches in diameter by 36 feet high. These are to be constructed of galvanized iron. How much wheat will each of these bins hold, and about what number of iron should they be made of? We will need about 1,000 bushels of tempering space, and I want to know how many bins 54 inches by 36 feet high it will require?—H. G. K.

ANSWER.—Superintendent Model Mill Company, Johnson City, Tenn.: A round bin 54 inches by 36 feet, as specified above, will have a holding capacity of 459 bushels of wheat, each, hence two bins of this size would hold 918 bushels of wheat. I would advise making the bins 57 inches in diameter by 36 feet high which would have a holding capacity of 512 bushels each, which would require two bins to furnish the desired capacity, namely — 1,000 bushels.

QUOTATIONS ON BRAN AND SHORTS

The following nominal quotations on bran and shorts have been reported by the Canadian National Millers' Association, Coristine Building, Montreal, to the United States Customs Authorities as the prices of these commodities now in effect. These prices are the net cash prices in bulk, f.o.b., the mill:

	Bran.	Shorts.
Montreal	$17.50	$19.50
Toronto	17.50	19.50
Port Colborne	13.00	15.00
Fort William	11.00	13.00
Keewatin	10.50	12.50
Winnipeg	13.00	15.00
Moose Jaw	10.00	12.00
Calgary	10.00	11.00

The Duster

A couple of pickpockets followed a man they suspected of carrying a roll, until he turned in at a lawyer's office.

"We'll wait till the guy comes out," said one.

"Naw!" replied his pal, "we'll wait till the lawyer comes out."

The boss: "All we have for you is a job as night watchman. How soon can you come?"

Mr. Weary: "Just as soon as I can go home and get my pyjamas."

"Your dog took first prize at the cat show?

"Why, how was that?"

"He took the cat."

Rufus Redd Dogg

"Holy Mackerel," emphatically exclaimed Rufus when for the 'umteenth time he was asked by the other members of the Spit and Chew Club down at the corner grocery to tell them something of what he saw at the big Exhibition, "how in the name of hiccupin' cats kin a man tell o' whut he didn't see. When I druv in t' th' country seat an' goes t' git me rail ticket th' smart aleck in th' box he sez t' me sez he, 'D'ye want a berth ol' timer?'

"An' whut 'd I be wantin' a berth f'r?" I sez, sez I.

"T' sleep in," sez he, "it's a doggone lawng trip t' T'rawnta."

"Whut does et cost?" sez I an' sez he, "et depends whut y' wants. It's three bucks f'r a lower an' two bucks f'r 'n upper."

"Why th' diff'rence?" sez I.

"Well," sez he, "th' lower ez higher than th' upper. Th' higher price ez f'r th' lower. 'f ye want et higher ye'll hev t' go lower. We sells th' upper lower than th' lower. In other words, th' higher th' lower. Mos' people" sez he, "don't like th' upper although et is lower, 'n accounts ef its being higher. When y'r in an upper ye hev to git up t' go t' bed an' git down when ye want t' get up. When ye hev a lower ye hev t' git out t' git up. Y' kin hev th' lower 'f ye pay higher. Th' upper ez lower than th' lower because et is higher. 'f ye 'r willin' to go higher et will be lower. Do I make meself clear?"

"Dang et a bit, sez I, "I'll travel in th' smoker, an' I wuz so tired stayin' awake all night thet when I gets t' T'rawnta I sleeps in th' ho-tel till it's near time t' come hum. I did git in to see a side-show thet set me back a dime. Et wuz a chamber o' horrors, I think, ther wuz dummies in et o' fellers thet wuz hung, murdered an' drowned. Th' wust thing ther' seemed t' me t' be a plasther mask o' th' ixpression o' a western grain growler on hearin' th' news thet th' wheat board wuz a fizzle . . . yes sirree, et wuz shure turr'ble. I'm dreamin' 'f et yet."

CANADA CEMENT
CONCRETE
FOR PERMANENCE

Protection Against Fire and Vermin— Impervious to Damp

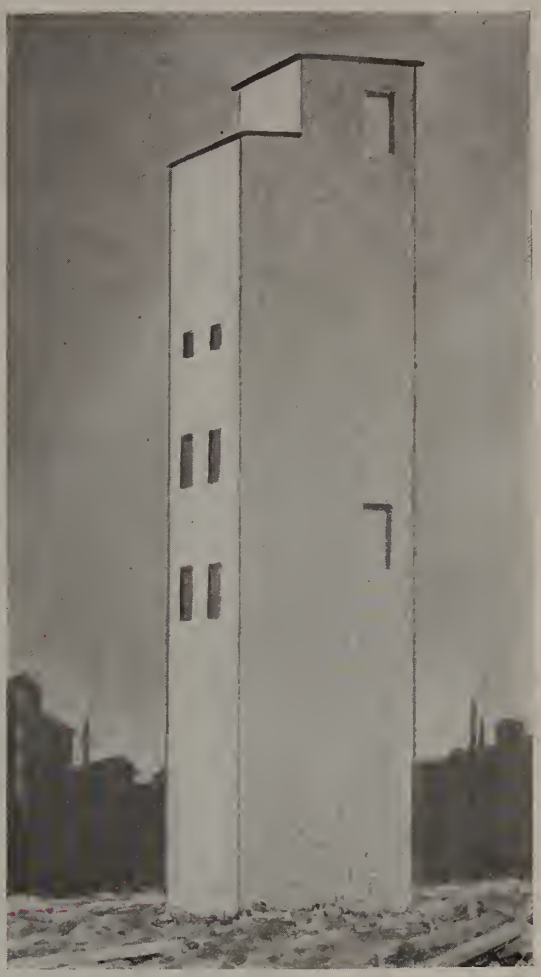
Concrete is equally desirable for the huge terminal structure and the small "line" elevator.

Realizing the importance of proper storage facilities, many large grain growers now ship their grain to a large elevator as soon as reaped—whereas, if they would build small Concrete elevators for themselves, they could themselves store the grain, and thereby take advantage of price advances that occur after the crop is in.

The durability—and consequent economy—of Concrete recommend it for almost any kind of structure; but its advantages are especially apparent for buildings in which grain is to be stored.

There are three great dangers that menace stored grain—all three of which will conquer most materials, but which meet their match in Concrete. These are Fire, Rats, Dampness.

To render the grain impervious to damp, to protect it against vermin, to safeguard it from fire—Concrete elevators are almost universally used.



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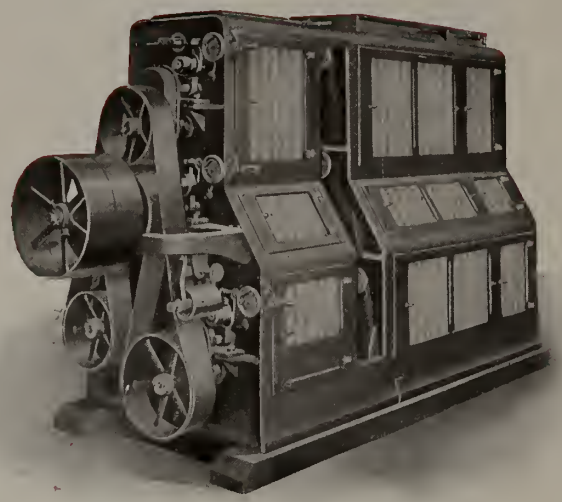
MIDGET MARVEL MILLS

Saves Half the Power Bill



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THE MIDGET MARVEL being self contained practically all machinery is on one floor under the eye of the operator. (No running up and down stairs.)

THE MIDGET MARVEL will doubtless permit you to run to full capacity even though your water power is insufficient for your present system.

However, the advantages of POWER, SPACE, and SUPERVISION are by no means all - - - - we recently sold one of our larger units to a miller with ample room and water power to run the numerous double stands of rolls with which his mill was already equipped. He found THE MIDGET MARVEL so efficient and satisfactory that he has no use for his other machinery.

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NIAGARA FALLS, ONT.

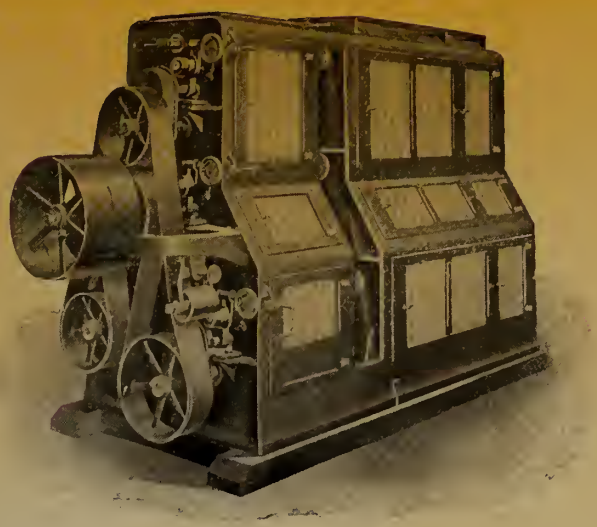
Western Office: 1206 Union Trust Building, Winnipeg, Man.

NATIONAL MILLERS' ANNUAL MEETING

CANADIAN
Milling & Grain
JOURNAL

VOL. III MONTREAL, OCTOBER 1st, 1922 No. 17

MIDGET
MARVEL
MILLS



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The Largest Millers In The British Empire

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Daily Capacity, 22,250 Barrels

Absolutely

cleans wheat or oats to No Dockage

and Reclaims Wheat from Screenings

Increase the Test Weight of Wheat

The scouring action of the discs revolving through the grain rubs off the fuzz. This raises the test weight about one pound per bushel. Many elevators put their wheat through a Carter Disc Separator simply to raise the test weight. Of course, the oats are removed at the same time.

Try the Carter at our expense

We will ship you a Carter Disc Separator suited to your needs with the understanding that if, after a reasonable trial, it is not satisfactory to you in all respects, you may return it at our expense. You can't lose on that proposition—*unless you neglect to act on it.*

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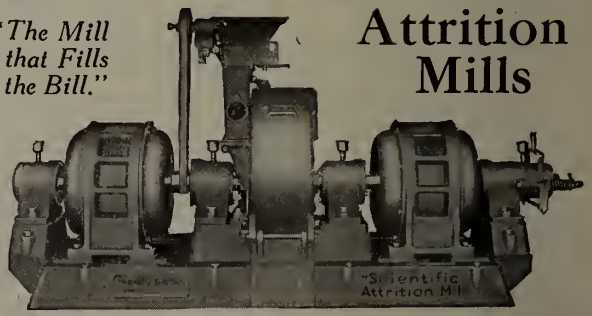
Attrition Mills



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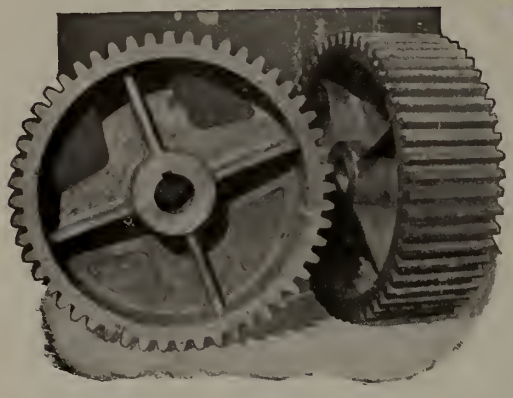

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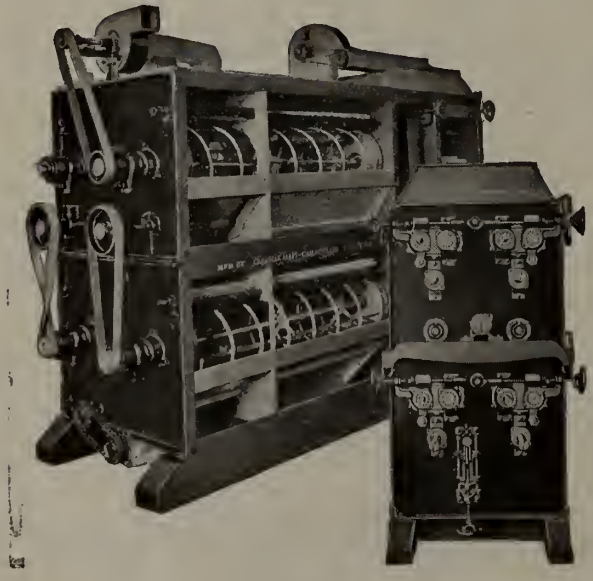
is equipped with

29 Self-Aligning Ball Bearings



UNIT flour mills equipped with plain bearings consume a surprising amount of power to overcome friction. This energy is not only lost, but is the source of a host of troubles which impair the efficiency of the mill.

The twenty-nine SKF marked self-aligning ball-bearings used in the above unit mill save most of this wasted power. They prevent heating, sticking and binding which often result from the use of plain bearings—at the same time they eliminate the wear which would cause rolls to get out of tram and necessitate readjustment. They also eliminate lateral or advance roll motion by slackness through worn bearings, thus giving an unvariable, rigid position to the roll.

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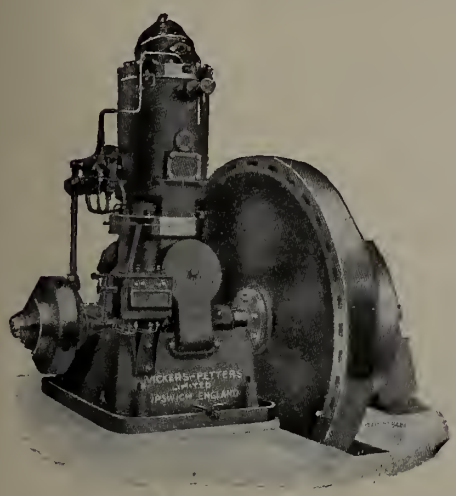

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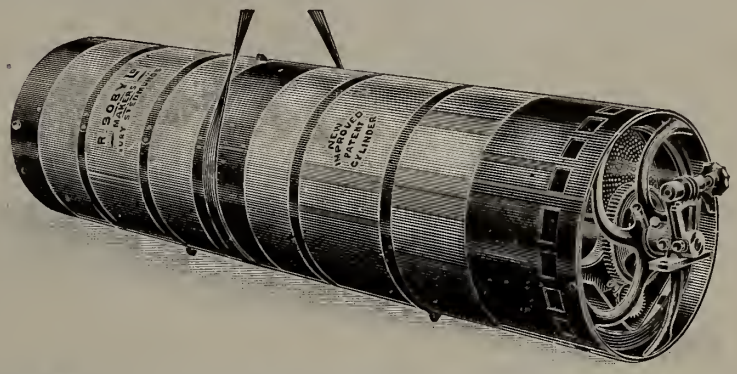

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VOL. III MONTREAL, OCTOBER 1ST, 1922. No. 17

CANADA'S ONLY MILLING AND GRAIN PAPER

Should be Productive of Much Good

THERE is no question but that the excellent spirit of comradeship and good fellowship which prevailed from the opening of the morning session to the close of the delightfully informal dinner with which the day's proceedings concluded was the outstanding feature of the Second Annual Meeting of the Canadian National Millers' Association, held in Montreal on Friday, September 22nd.

Millers, hard headed business men, are as a rule generally regarded as being unsociable, preferring to surround themselves with an atmosphere of aloofness and reticence regarding their affairs.

But from those who attended the meeting such strangeness was far removed. Whether it was after the morning business meeting, during the trip round the port of Montreal as the guests of the Harbor Commissioners, or at the dinner which was the crowning event of a day of many, they were men who, three hundred and sixty-four days out of the year are keen competitors, fraternized and discussed one with the other each other's problems.

The annual report and the president's address, reports of which will be found elsewhere in this issue of "Canadian Milling & Grain Journal", were of interest and of value but the social side of the meeting advanced, as perhaps nothing else could, the interests of the Canadian milling industry.

The British and American Debt

IF Europe would agree to a sound programme of debt readjustment and the elimination of worthless currencies, both England and her biggest creditor, the United States, could well afford to agree to an indefinite postponement of the huge amounts due each other on account of the loans made to the respective countries during the late war. If such a programme were agreed upon and put into operation, trade and commerce would soon revive, and thereby England and America would indirectly recover their principal in this manner much sooner than they will ever be able to obtain it from debtors who are at present totally unable to pay and who are getting weaker and weaker all the time.

No world stability can be attained, let alone exist, under such conditions as these.

Trade Situation Improving

THE fact that Canadian funds at the time of writing are at par in the United States and statistics showing that Canada continues to import more from across the line than she is exporting and still exporting more to Great Britain than that country is sending us, should go far towards confirming the growing belief that the crisis in business has been passed and that normal times are again within hailing distance.

But after having stuck to the wheel during many weary months in order to keep things moving at all costs until the danger period had been negotiated, business men throughout the Dominion should not at the first sign of success for their efforts feel content to lie back and take things easily, for the consolidation of the improved position which is beginning to be noted, demands more hard work, more perseverance, and more real skill than has heretofore been necessary.

Incompetent Millers

THERE are altogether too many young men who, after working for a while in a flour mill become seized with the idea that they are fit to take full charge of a milling plant and secure positions which they are not at all qualified to fill and at a salary figure that a really capable miller could not afford to accept.

A miller who is a good miller in every respect has devoted a great amount of time and money towards acquiring the necessary training and knowledge that it requires to operate a mill successfully.

A good miller is entitled to a salary commensurate with the results he is achieving, but an incompetent miller would be dear at any price.

It is often a problem with a mill owner to determine whether or not the miller he employs is getting the best results. The surest way to find out if the miller is incompetent, or otherwise, is to have a mill that is modern in every particular, for given an up-to-date plant there is only one reason why it should fail to produce the best results, and that is incompetence on the part of the miller charged with its operation.

If all mills had automatic scales for weighing all cleaned wheat ground and tallies and packers to register the finished product, or, in other words, were run on a daily test, the incompetent miller could not last long, for the mill records would soon show him up.

A competent miller fears no tests, indeed, he welcomes them as a method of proving his capabilities.

Line and Country Elevators

THAT the line and country elevator is a prominent institution in the different communities in which they are located throughout the country is a fact which needs no great amount of effort to prove, for a visit to any one of them will clearly prove the assertion.

It is a fact too, that line and country elevators are assets in the communities in which they are located. Of course, like other important business institutions they are successful just in proportion to the amount of business sense that is put into their management and no more.

A line or country elevator by maintaining a clean and up-to-date appearance becomes an excellent advertisement for itself and its owners directly and indirectly for the community. A line or country elevator in which the most up-to-date methods are practiced and most modern equipment is installed rarely fails through lack of business.

In many districts in western Canada places which might otherwise be almost unknown beyond a radius of fifteen or twenty miles find a place on the map because of their elevator facilities which represent collectively one of the most important links in the system by which a basic foodstuff is distributed to the markets of the world.

Neglecting Our National Assets

IF the Dominion of Canada is to ultimately fill a part worthy of her greatness towards making the British Empire self-sustaining, there will have to be framed and diligently carried into effect a much more aggressive policy for the development of her natural resources than at present obtains.

The potential wealth of the country as expressed by her water powers, her timber, her fur, her mineral, her fishery and other resources are as yet virtually untouched. What has been done in different parts of the country has only served to reveal natural wealth the value of one-tenth of which if expressed in dollars and cents would, by comparison, make the figures of the nation's debt shrink into insignificance.

One of the chief requirements of a country possessed of such vast natural wealth as Canada is population, and a sound immigration law which will be neither too rigid nor too elastic should be decided upon as a preliminary.

Pending, however, a satisfactory inflow of new Canadians it would seem as though the request of the various provinces for independent control of the national resources within their respective boundaries should be acceded to. At the present time federal and provincial powers in this respect are divided, but it would be reasonable to expect that provincial control of natural resources under federal supervision, which latter should be advisory rather than executive, would make for speedier progress towards the development of the national wealth.

More population plus more aggressive development of the country's national resources should go far towards solving the railway problem which is to-day driving the country into bankruptcy.

Other Points of View

THE ENGLISH ROADS

London Morning Post: The roads are for the public use; and, as matters stand, they lead either to the hospital or the cemetery. As for the horseman and the driver of horses and the pedestrian, who have an equal right with others, they are expelled from the highways and deprived of their rights. Motor traffic needs new roads altogether.

LAW AND LICENSE

The Australian: Licensing legislation has become a political bogey, for no sufficient reason. If legislators will keep in view the fact that in the control of the liquor trade, as of every other trade, the first essential is to meet the public convenience, reform will be much more effectual.

THESE POST-BELLUM DAYS

Boston Transcript: A hundred years ago the shutting down of an American consulate might have been a casus belli between the United States and Great Britain. Now the casus pacis, however, is too firmly established.

THE LAW'S LIMITATIONS

Manchester Guardian: Law, by its very nature, can only deal in equality and cannot guarantee equity. The hard case is inevitable wherever each counts for one; but the existence of the hard case does not discredit the law. No more do the spasms and jerks of democratic legislation, that attempts to keep the law hard on the heels of opinion, discredit democracy. Democracy can be blamed for refusing to learn by its blunders, scarcely for being fallible.

GERMANY AND THE LEAGUE

Cleveland Plain Dealer: Germany's exclusion has been due almost wholly to the hostility of France. France has held that until the Germans made an honest effort to fulfil the terms of the Treaty of Versailles they should be kept out of good international society. There is little logic in this contention. It is even conceivable that membership in the League of Nations might tend to induce Germany to make a stronger effort to pay her debts.

THE GOLDEN AGE OF CHESS

London Daily Telegraph: Chess has probably the widest range of any game in the world. Its international character is such that it would be rash to expect Great Britain to win and maintain pre-eminence in the field of competitors. The seventies of the last century perhaps witnessed the strongest period of English chess. Blackburne and Bird were native born, but it must be confessed that names such as Steinitz, Lowenthal and Zukertort, which gave lustre to the time, have no English ring about them. These masters were naturalized amongst us, or made England their home because of the great interest then taken in chess.

The Greek government through New York brokers recently completed a deal for 666,000 bushels of Manitoba wheat, the first of the large overseas orders to be received this season.

Eastern Provinces

MONTREAL

Dubrule Building
Phillips Square

Tel. Plateau 1983

MONTREAL OCTOBER 1ST, 1922

THE MONTREAL MARKETS

Flour.—There has been of late a somewhat improving demand from English importers for Canadian spring wheat flour, and because of the weakness of the wheat market, the bulk of the orders were accepted by millers. The demand for supplies for domestic and country account continues fairly good, and the market on the whole has been more active with a steadier undertone. Sales of car lots of first patents are being made at $6.80, second patents at $6.30, and strong bakers at $6.10 per barrel in jute bags, ex-track, less 10c per barrel for spot cash.

There has been no appreciable change in the condition of the market for winter wheat flour, prices being maintained on account of the somewhat limited supplies available on spot, and the steady demand for the same. A fair business is being done in broken lots of choice grades at $5.20 to $5.30 per barrel in second-hand jute bags, and in winter wheat patents at $5.50 to $5.60 per barrel in new cotton bags, ex-store, while car lots of choice grades sold at $4.80 to $5 per barrel in second-hand jute bags, ex-track. White corn flour is unchanged at $4.40 to $4.50 per barrel in jute bags, delivered to the trade.

Millfeed.—The demand for millfeed continues steady for local and country account, supplies being ample to meet all requirements. Prices have been reduced approximately $1 per ton since last report, present quotations being: Manitoba bran $20 per ton, shorts $22 per ton, and middlings $27 per ton, including bags, ex-track. The market for rolled oats has been steady with a moderate amount of business being done in standard grades, which are quoted at $2.90 to $3 per bag of 90 lbs.

Baled Hay.—A fair amount of business is being done in this commodity and as supplies coming forward are at present ample to meet all requirements the tone of the market is steady with sales of car lots of good No. 2 timothy being made at $17 to $18, No. 3 timothy at $15 to $16, and clover and clover mixed hay at $13 to $14 per ton, ex-track.

Grain.—There has been an improved demand locally from foreign buyers for grain, and as several of the prices bid were workable by exporters on Winnipeg quotations prevailing at the time, sales of some loads of No. 1 and No. 3 northern wheat and No. 3 and 4 barley, and No. 2 C. W. oats, were closed for October shipment. The demand from New York exporters for Manitoba spring wheat has also been fairly good and sales of some round lots of No. 1 and 3 northern were made recently at f.o.b. and c.i.f. prices for loading here not later than October 10. There have also been closed sales of some round lots of American rye and Canadian western barley at c.i.f. prices at bay ports.

GRAIN AND SHIPPING MEN DENY CONGESTION

The recent statement made in Quebec that Montreal's port is hopelessly congested, is meeting with denials from grain and shipping circles in Montreal which is doing the record grain traffic of its existence in spite of the fact that more grain has been shipped out this season than last and over a hundred more vessels cleared, there has been no demurrage.

"Not a single case of demurrage has been reported this season," said Mr. W. J. Whelan, manager of the Grain Clearance Board speaking on the subject. "The Quebec report is something which came to us also from Chicago where the very same report was broadcasted.

"There was demurrage last year at this time on more than one ship but not a complaint this season. We have at present 25 lake boats in port waiting to be unloaded and 5 more which are being emptied with one waiting to get into the unloading berth. These lake ships are not waiting more than four days or five at the most. The owners of these ships are quite satisfied.

"To look to the grain boats and claim that there is congestion is quite beside the mark. There is no congestion of ocean boats which are here and being loaded without any trouble. We have not even been extended to our limit yet. A floating elevator was put into service but recently. We have 8 others but do not require them yet.

"Last year at this time there were over eighty ocean ships in port and this year just half that number. That does not look like congestion considering the fact too that we have actually moved out more grain."

HEAVY SHIPMENTS OF FLOUR TO EUROPE THROUGH PORT OF MONTREAL

Flour shipments from the port of Montreal to Europe are considerably heavier than last season and give indications at present of keeping up to the new level.

Up to the end of August and including September 2, the total shipment of Canadian flour reached 1,732,949 bags as compared with 1,582,038 bags for the same period last year, an increase of 150,911 bags.

The export totals for each month of the present season are as follows: May, 371,109 bags; June, 533,-850 bags; July, 334,801 bags; August, 493,189 bags. Not a liner has left Montreal without carrying a consignment of flour, but the palm for big cargoes goes to two freighters, the John Ludwig, which sailed from here May 24, for Russia, with 57,620 bags of flour, and also the Western Plains took away last month a cargo of 55,247 bags of flour to Hamburg.

As far as can be learned the rumors of hostilities have not affected the export of Canadian produce or food products, and it is pointed out that when war is really meant these commodities are usually in tremendous demand by foreign countries. The quietness of the local produce market is taken as a fair guarantee that actual fighting is not anticipated.

Grain Rush of 1922 Finds Port of Montreal Well Prepared

The first shipments of Canada's 1922 grain crop arrived in Montreal from the west recently, inaugurating what is confidently expected to prove the heaviest volume of grain traffic in the history of the port. Nearly ninety million bushels have already been handled at Montreal this season to date, and it is believed that by the end of the year last season's total of 138,453,980 bushels will be far exceeded. Full preparations for the efficient handling of this immense flow have been completed by the Harbor Commissioners, and according to a statement by Dr. W. L. McDougald, president of the board, grain will continue to be transferred from lake vessels and railway cars to the waiting ocean steamers with the same despatch as at present.

Dr. McDougald says he believes that Montreal, already the greatest grain exporting seaport in the world, will be found to have established a new record at the close of the present season. Shipments to date are not only equal to those of last year at the same period, but the heavy flow has still to commence, while at this time last year the busy period had been on for several weeks. At the present time the principal varieties of grain being shipped are American wheat, corn and rye, and Canadian rye; while on the way down from the lakes are American and Canadian wheat, and American and Canadian rye.

Tramp steamers are being diverted to Montreal in large numbers to take away the huge volume of grain expected from the west. Between September 15, when shipments of the new Canadian crop actually began to come in, and September 30, fifty-one tramp steamers are already scheduled to arrive, in addition to the vessels that visit Montreal regularly, and names of other tramp vessels are being added to the list daily. According to records supplied by Mr. W. J. Whelan, in charge of the office of the Grain Clearance Board, twenty-four lake vessels were unloading or waiting to unload their cargoes here on one day recently.

Tramp steamers already chartered for Montreal will carry away an amount estimated at about fifteen million bushels, while during the same period several million bushels more will be taken out by the regular liners visiting the port.

DEPRECIATED FOREIGN CURRENCY MAKES GRAIN MARKETING DIFFICULT

Winnipeg.—Pointing out that Canadian wheat delivered at Hamburg for $1.50, Canadian currency, would cost the German buyer over $300 a bushel, based on the pre-war value of the mark, and that other European currencies were far below pre-war value, Mr. C. H. Leaman, retiring president of the Winnipeg Grain Exchange, in addressing the annual meeting of that organization recently, said the greatest difficulty in marketing grain this year was found in the inability of the buyers to pay.

"The depreciation of the currencies," he said, "the appalling burden of debts in Europe, the political uncertainty, the fear on the part of the United States that if she accepts goods in payment of the debts owing to her she will handicap her own industries—all these things result in this: that overseas buyers of wheat buy from hand to mouth, buy only what they must buy, buy only for the immediate and near future, and buy not according to what they need, but according to what they can afford. There is no doubt that Europe needs all the surplus food which this continent will have, but there is no doubt that Europe cannot pay for what she needs. This is the one difficulty in selling our surplus supplies at satisfactory prices, and it is a difficulty which cannot be removed by any wheat board or by any change in the method of marketing."

DISCRIMINATING LAKE FREIGHT RATES

Winnipeg.—Great dissatisfaction is being expressed here by the shipping trade at the discrimination in large freight rates by the Canada Steamship Lines and strong protests are being made to Ottawa.

During the early part of September grain was carried to Buffalo on Canadian bottoms for 2c, while vessels could never be chartered for Port Colborne for example, which is less than 16 miles from Buffalo, for less than 3¾c, and to bay ports the same.

Why are Canadian Lake steamers allowed to charge 3c for carrying a bushel of wheat on a trip only two days, when American steamers are willing to carry a bushel of wheat on a trip that requires three days for 2c to 2¼c?

THE CHICAGO MARKETS

The following table compiled from figures furnished by Messrs. Logan & Bryan, members of the Winnipeg Grain Exchange and the Chicago Board of Trade, C.P.R. Telegraph Chambers, Montreal, show highest price levels recorded on Chicago Board of Trade from Sept. 12, 1922 to Sept. 25, 1922, inclusive.

	Sept. 12	Sept. 13	Sept. 14	Sept. 15	Sept. 16	Sept. 18	Sept. 19	Sept 20	Sept. 21	Sept. 22	Sept. 23	Sept. 25
September Wheat	1.01	1.00¼	0.98⅜	1.01⅝	1.02⅜	1.07	1.04½	1.06⅜	1.07⅛	1.09⅞	1.07½	1.06⅝
December Wheat	1.02¼	1.01½	1.00½	1.02	1.02⅜	1.07½	1.05	1.07	1.07	1.09⅜	1.07	1.05⅜
May Wheat	1.07	1.06⅜	1.05⅝	1.06¾	1.07⅛	1.11½	1.09	1.11¼	1.11	1.13⅝	1.11	1.09¼
September Corn	0.62¼	0.62½	0.62⅛	0.62⅜	0.62½	0.63½	0.63½	0.65	0.64⅞	0.65¼	0.63¾	0.62½
December Corn	0.57⅜	0.57⅛	0.56½	0.57⅜	0.57½	0.58⅝	0.58⅛	0.59¾	0.49¾	0.60⅝	0.59⅛	0.58¾
May Corn	0.60⅞	0.60⅝	0.60	0.60¾	0.60⅞	0.61¼	0.61⅜	0.62⅝	0.62¾	0.63⅜	0.61⅝	0.61½
September Oats	0.35¼	0.35	0.36	0.37¼	0.37½	0.38⅞	0.38⅛	0.39⅝	0.39⅞	0.40⅝	0.39⅞	0.40
December Oats	0.35⅛	0.34⅞	0.34⅞	0.35¾	0.35¾	0.36¾	0.36¼	0.37¾	0.37¾	0.37⅞	0.37⅜	0.36¾
May Oats	0.38	0.37¾	0.37⅜	0.38⅛	0.38⅛	0.38⅞	0.38⅜	0.39½	0.39½	0.39⅝	0.39¼	0.38½
September Rye	0.71⅛	0.70⅛	0.69¾	0.71⅝	0.71⅝	0.74¾	0.72½	0.73½	0.73	0.73¼	0.71½	0.70¼
December Rye	0.71½	0.70½	0.70	0.71¼	0.71½	0.73	0.72	0.73	0.72¾	0.73½	0.73	0.71¼
December Barley	....	0.55½	0.55½	0.55⅝	0.55½	0.56½	0.56½	0.57¼	0.57¾	0.58	0.58	0.57¾

Ontario

TORONTO

TORONTO OCTOBER 1ST, 1922

THE TORONTO MARKETS

Flour.—Increased activity in the local market during the past week or ten days proved to be somewhat artificial. It is generally admitted that had the market not shown the life it did, prices for flour would have declined still more. A lot of flour was sold recently, both for domestic and export trade, but the market is falling again and buyers once more are merely looking on. Quotations at the present time are 35 ($7.75) shillings for Manitoba and 33 shillings and 6 ($7.41) pence for Ontario winters. At the moment there is little demand for domestic flour and buying is from hand to mouth. Bakers are not yet ready to put in their winter's supply and are still looking for ninety-cent wheat, which would mean flour at $4.75.

Millfeed.—There are large surpluses of millfeeds in the hands of the millers, and all kinds are being offered, even by the brokers. Bran is quoted at $20.00 and shorts at $22, but are being bought at as low as $19 and $21. Local dealers say that the Americans are offering better prices than the Canadian dealers can obtain after paying duty and freight. With the raise in the new tariff on millfeeds from ten to fifteen per cent. it is increasingly difficult to do business in the Canadian product. The f.o.b. mills price on the Canadian sales has to be higher than the f.o.b. mill Canadian market value. Feed flour is quoted at $1.70 and white middlings at $28.00. Toronto dealers have been advised that the American market is advancing sharply, and to some extent unexpectedly. It is pointed out that this should be a season of heavy production and of weakness in feed prices. The advance, however, seems to be due to a short interest which has been built up in the States in anticipation of heavy milling and lower prices, also to the fact that retailers have allowed their stocks to become depleted, and their requirements, together with the desire of shorts to cover, has created a very strong market across the border where the mills are taking advantage of the situation to mark up prices. It is the general opinion, however, that the advance has been so sharp that a reaction will shortly set in.

Grain.—Locally the grain business continues on a very moderate scale. There has been some demand for oats, with offerings of both Ontario and Western grains light. Millers are buying wheat on a hand-to-mouth basis, while some movement of oats and barley to Montreal and eastern points appears to be in progress, but whether this is for export or not has not been disclosed. Generally speaking, grain markets have been firmer, early announcements from the East being followed by an immediate advance in price of wheat of five cents a bushel, at both Winnipeg and Chicago. Although this advance has been lost, and prices since have been fluctuating, within a fairly wide range, on the whole wheat prices are averaging higher. There is little change in the general position of supplies and requirements. Towards the close of September, Manitoba No. 1 wheat advanced sharply on the Toronto Board of Trade, offering at $1.11½ or 3¾ points above the previous close. The big price movements in wheat reflect market sentiment regarding developments in the Near East. Wheat operators here are of the opinion that the advance was pretty well discounting bullish price-making influences, and that any favorable views on the Turkish situation would be the signal for price recessions.

Cereals.—There is only a moderate demand for rolled oats, although domestic consumption is increasing somewhat owing to the advance of cooler weather. Mill prices to the domestic trade range $2.90 to $3.05 per 90-lb. sack in mixed car lots, and for oatmeal in 98-lb. bags, $3.20 to $3.35. For export rolled oats are 40 shillings and 6 pence ($8.94) per 280 lbs., c.i.f. Glasgow, and oatmeal 38 shillings and 6 pence ($8.52).

OGILVIE FLOUR MILLS CO. BONUS

At a meeting of directors of the Ogilvie Flour Mills Co., Limited, in Montreal recently, there was declared a bonus for this year of 10 per cent, as well as the regular quarterly three per cent dividend. Anticipation of such an action was indicated in the trading in the stock during the day of the meeting, that issue advancing eleven points to the closing at 261, a new high for the year, and considerably in advance of last year's high which was 214.

The company has a record of liberal bonus distributions, last year being the first since 1918, that they did not make such presentation. In 1918, in addition to the regular 12 per cent, was added a bonus of 15 per cent; in 1919 there was added to the regular 12 an extra distribution of 15 per cent, while in 1920 was given an extra 10 per cent, in addition to the regular 12 per cent. Last year only the regular 12 per cent was paid.

The fiscal year of the company ended on August 31, and at the annual meeting to be held on October 12 the statement for that period will be presented, an exhibit which is sure to show good reason for the above action.

Toronto.—The Diadem Flour Company, Limited, is the new name of Messrs. McFall, Limited. The company is authorized to carry on a general milling business and to engage in the manufacture of flour and feed.

MILL MACHINERY FOR SALE

The undersigned are open to receive offers for the purchase of equipment of a flour blending plant, either in whole or in part, to close out an estate now in liquidation. Further particulars can be obtained from

THE STERLING TRUSTS CORPORATION

12 KING STREET EAST TORONTO

GRAIN INSPECTION SYSTEM IS SAID TO BE UNDER INVESTIGATION

Winnipeg.—Report is current on the Grain Exchange that an investigation is quietly proceeding into the activities of the inspection department of the Board of Grain Commissioners at Fort William, and possibly elsewhere, and that a shake-up of considerable proportions is contemplated for the near future. It is understood that the investigation arises out of alleged activities of certain mixing houses or private elevators at the head of the lakes in the promotion of grades. Rumors have it that cargoes covered by a Government grade certificate have been turned back from United States ports on the ground that the wheat did not measure up to the grade mentioned in the certificate.

It is understood that an agent of a United States purchaser appeared before the grain commission officials some two or three weeks ago, protesting that the grain allowed to a cargo was not in accordance with the sample turned into the board. He followed this up, it is said, by wiring the United States purchaser to demand a review of the cargo at its destination.

It is understood this review resulted in the cargo being turned back.

FORT WILLIAM ALSO HEARS OF GRAIN INSPECTION INQUIRY

Fort William.—Investigation into alleged irregularities in inspection of outbound grain at the head of the lakes will probably be made by the Board of Grain Commissioners shortly. It is stated that in a certain case samples supposed to have been taken from a vessel loaded with poor grade grain were handed in, the samples being of a higher grade to that of the cargo. The boat was cleared as being loaded with the higher grade grain, but when the cargo was taken by the consignees they objected to the grade and demanded re-inspection.

So far as known no charge has been laid implicating any person concerned in any fraudulent attempt to pass off inferior grain at a higher price, but one of the staff of inspectors has been laid off, presumably for carelessness in the handling of inspections. Meanwhile a general investigation of this case and any others that may be brought before the Board will likely be held by the Board of Grain Commissioners within two weeks, possibly at a session in Winnipeg.

TRADE OPPORTUNITY

No. 000.—Mr. A. R. Gray, Warehouse No. 432, Upper Quay, Aberdeen, Scotland, would like to get in touch with a good reliable active flour milling concern, a free seller all the year round and supplying a first-class steady article. Market traded in by inquirer demands patent with considerable strength bulk being necessary to meet bakers' requirements. References. The North of Scotland & Town & County Bank, Ltd., Aberdeen, or the George P. Plant Milling Company, St. Louis.

The Modern Sophocles

ONE wonders how much of the success, or popularity, or fame of great men is due to their own qualities, and how much to that mysterious force called personal magnetism. Throughout the ages men have been inclined to put one of their fellows on a pedestal and worship him, but they rarely have done it voluntarily unless he possessed this irresistible quality. The quality itself is so elusive, that it is almost impossible to define it. It is not genius, for men have been geniuses without becoming in any sense popular heroes. It is not tact or personal charm, though these sometimes seem to enter into it. Napoleon and Cromwell were popular heroes, but their wildest champions could not credit either of them with tact or charm. The expression "Superman" seems to be the nearest approach to a definition, if it can be called a definition. It implies at any rate that the object of hero worship possesses some quality beyond the usual human experience.

TORONTO TRADE NOTES

Toronto.—Toronto seed dealers believe that the new United States tariff will deal a severe blow at the export trade in alsike and red clover seed. They point out that for many years there has been a large export business done in these seeds with the United States. A toll of $4 a hundred pounds will be levied by the tariff now in force. Peas of all kinds, which formerly paid a duty of 10 cents a bushel, will now pay 60 cents. In a last rush to avoid the duty, shipments of seeds to the United States have been very heavy during the past week.

Toronto.—The Toronto Milling Company, Ltd., whose mill is at Streetsville, have opened a Toronto office at 410 Lumsden Building. The company formerly had its Toronto office in the C. P. R. Building, but this was closed some months ago.

Mr. Douglas Campbell, formerly of the Maple Leaf Milling Company, Ltd., has returned to Toronto after an extended visit to Great Britain and the Continent.

W. J. Kerr, of the Kerr Milling Company, Ltd., was a recent visitor to Toronto.

Mr. James Murray, of the Quaker Oats Company, Chicago, was a recent caller on the Toronto milling trade.

Mr. C. R. Vannatter, of Vannatter & Ham, Limited, Dominion Bank Building, Toronto, returned recently from a business trip to Winnipeg and Chicago.

Mr. H. Wills, of Messrs. Bowring Bros., one of the largest wholesale flour firms in the Maritime Provinces, was a recent caller at the office of the Maple Leaf Milling Company, Toronto.

Mr. R. Hetherington, secretary of the Dominion Board of Grain Commissioners, Fort William, Ont., accompanied the Board during their visit east recently.

Western Provinces

WINNIPEG

WINNIPEG OCTOBER, 1ST. 1922

THE WINNIPEG MARKETS

The demand for flour has been good of late and considerable business is passing with both export and domestic interests fairly active. Western millers appear well satisfied with the situation, and are looking forward to a steady trade and a good year's volume of business.

Up to Monday, September 18, wheat prices had steadily declined, and shown no indication of strength. Flour prices also had lowered, there being two reductions since last report and the date mentioned. Political news from Europe was such that the heavily over-sold markets on this side were quickly affected, and shorts, in their effort to cover up fearing another European war, found offerings light, and prices advanced over 7c in one session. Flour prices were immediately raised 30c per bbl. during the afternoon of September 18, and have continued unchanged from that time. Present prices are: For delivery at points between Fort William and the Saskatchewan boundary, top patent springs are quoted at $6.30 bbl., jute seconds at $5.70 and first clears at $5, mixed cars, 30-day terms; cotton 10c over this basis. Saskatchewan and Alberta points are 10c under Manitoba, and Pacific coast points 30c to 50c over. Bakers and other car lot buyers get special prices.

The domestic trade has continued steady, and many farmers and jobbers are laying in their winter supplies. Bakers, also, are showing an indication to make their annual contracts for flour, and a few already had done so previous to the last advance. Very few here believe the present strength will continue, and it is freely predicted that flour prices will shortly lose the latest 30c advance owing to a reaction in wheat values.

The western millers are finding a splendid market in the Orient for their low grade stocks and steady shipment is being made. This has resulted in higher prices for ocean tonnage, the rates having advanced from $4.50 per ton to $6 per ton from Vancouver to Shanghai. However, this does not seem to have affected business.

There is a better inquiry for Canadian flour for export to Europe. Local millers also report a good demand for Manitoba spring flour from eastern United States markets, and considerable business is being worked at present levels, the buyers paying their government the duty. Considerable quantities have been shipped to the New York market, where it is in particular demand by jobbers and bakers.

Mill Feed.—The demand for bran and shorts continues good notwithstanding the warm weather throughout the west and the fact that there is still plenty of green feed. Mills in western Saskatchewan and Alberta are also shipping to Vancouver, where it is understood it is finding an ultimate market further south. Present quotations are: Bran, $17 per ton, in mixed cars with flour; shorts, $19 per ton, in bags, delivered, Winnipeg territory.

Oatmeal.—Business in rolled oats and oatmeal is steady but not urgent. Present quotations are: Good brands of rolled oats, $2.50 in 80-lb. cotton bags; oatmeal, $3.05 in 98-lb. cotton bags, delivered Winnipeg territory.

Rye Flour.—An ordinary business appears to be passing, the demand is quiet but prices are firm and show practically no change from previous report.

International Press

JAMES ARMSTRONG RICHARDSON, B.A.

Recently elected by acclamation as Vice-President of the Winnipeg Grain Exchange for the year 1922-23. Mr. Richardson is one of Canada's leading grain men. He is president of James Richardson & Sons, Ltd., grain exporters, Winnipeg, with offices at Kingston, Calgary, Toronto, Montreal and other Canadian points. He is a member of the Winnipeg and Calgary Grain Exchanges, the Toronto, Montreal and Chicago Boards of Trade and the New York Produce Exchange. He is also a director of the Canadian Bank of Commerce, president of the Eastern Terminal Elevator Co., Ltd., of the Pioneer Grain Co., Ltd., and Anchor Elevator Co., Ltd., vice-president of the Great Lakes Transportation Co., Ltd., and of the Guardian Realty Company of Canada; also a director of the Valley Camp Coal Co., Ltd., of the Kingston Portsmouth and Cataraqui Electric Railway Co., and of several other Canadian companies.

Wheat.—During the first half of September wheat prices were rather erratic and although they did not move far in any direction they were undoubtedly reflecting a lower tendency, the low point of the downward movement being reached on September 14, when October wheat fell to .93⅝c and

closed at .93¾c. At this time, however, disturbing news from the Far East was responsible for an absolute change in sentiment, the news in regard to the possibilities of war being sufficiently alarming to cause active covering by "shorts", and this was chiefly responsible for the substantial gains, the October future closing on September 20 at $1.00⅜.

Business among exporters gives the true indication of the conditions of the trade in regards to the foreign political situation, and although there has been a good active export trade in evidence right along, business in export circles was not particularly keen. The United Kingdom and the Continent in their buying operations, have been following the custom of backing away from the offered price, endeavoring to get lower values, but generally taking one or two loads at the asked price.

Oats.—On account of the lightness of stocks this cereal, in both cash and futures, has been dull and featureless. Dealers in oat districts in Northern Manitoba report the new crop is beginning to move and when this movement reaches its full volume business in this cereal will become more active.

Barley.—Demand not quite so keen during the middle of September and premiums fell off somewhat. Exporters have been the chief buyers of what trading has been going on.

Flax.—Very narrow trade and will continue quiet until new crop arrives. Available supplies very light but appear to be able to take care of the crushers' needs at the present time.

Rye.—Good undertone and fairly active trade going on with exporters chief buyers.

C. P. R. TRANSCONA YARDS RE-OPENED

Winnipeg.—In connection with the rapid increase in the quantities of grain which are requiring immediate transportation, the Canadian Pacific announce that the freight yards of the company at Transcona have been re-opened to facilitate the handling of grain. Transcona and Winnipeg yards together afford a total track mileage of 303.7 miles, the largest owned by a single railway on the American continent.

WESTERN MILL AND ELEVATOR NOTES

Mr. L. D. Jackson, formerly chief chemist at the Western Canada Flour Mills Co. mill, Winnipeg, has bought controlling interest in the Sykes Bread Co., Ltd., Hamilton.

Lieut.-Col. Frank S. Meighen, President, and **R W. Reford,** a director of the Lake of the Woods Milling Co., both from Montreal, spent a few days in Winnipeg recently, on their way home from the West.

Mr. Jas. I. Loutitt, representative of the Lake of the Woods Milling Co., at Vancouver, spent a few weeks in Winnipeg recently with Mrs. Loutitt. Mr. Loutitt is a real "old timer," having spent the past 42 years in Winnipeg and Western Canada. He has a large circle of friends in this city.

Mr. A. W. Alcock, formerly of the Dominion Grain Research Bureau, will succeed Mr. L. D. Jackson as chief chemist of the Western Canada Flour Mills Co., Ltd., Winnipeg. This appointment follows the resignation of Mr. Jackson from the service of that company.

Winnipeg.—The Metcalfe Milling Co., Ltd., has decided to replace its 150-bbl. oatmeal plant at Portage la Prairie, Man., which was burned early last summer.

Kandahar, Sask.—The local elevator of the National Elevator Company, Ltd., Winnipeg, was burned down recently. It will be rebuilt this year.

Mennon, Sask.—Mr. P. P. Abrams, paymaster for the National Elevator Company, Ltd., was held up and robbed recently of $1,400.

Kilwinning, Sask.—The National Elevator Company, Ltd., Winnipeg, opened a new house here recently.

Vegreville, Alta.—The National Elevator Company, Ltd., Winnipeg, have been operating their new house here since the early part of September.

Mr. T. Malmer, who has been superintending the building of the Maple Leaf Company's new elevator at Daysland, Alta., has returned to Innisfall, Alta., on the completion of his work.

MANITOBA WHEAT SMUT FREE

Winnipeg.—It would seem as though a record has been established this year in the absence of smut in wheat, for reports from all parts of the country state it is practically unknown in Manitoba and there is very little in Saskatchewan and Alberta. Growers are holding their wheat in many districts now that the price is below the dollar mark.

THE WESTERN MARKETS

The following report furnished by Messrs. Baird and Botterell, 103 Grain Exchange, Winnipeg, shows daily highest price levels from Sept. 12, 1922, to Sept. 25, 1922, inclusive.

	Sept. 12	Sept. 13	Sept. 14	Sept. 15	Sept. 16	Sept. 18	Sept. 19	Sept 20	Sept. 21	Sept. 22	Sept. 23	Sept. 25
October Wheat	0.96¼	0.95⅝	0.94⅝	0.96	0.96	1.03	0.99½	1.00⅝	1.02	1.03⅞	1.01⅛	0.98½
November Wheat	0.96	0.95¾	0.94⅝	0.96½	0.96⅜	1.03½	0.98⅞	1.01	1.02¼	1.04	1.01	0.98¼
December Wheat	0.94½	0.94	0.93⅛	0.93⅜	0.93⅝	1.00¼	0.97½	0.98	0.98¾	1.01	0.98½	0.95¼
May Wheat	0.99⅝	0.99¼	0.98½	0.98⅝	0.99	1.05	1.01¼	1.03¼	1.03⅞	1.05⅞	1.03½	1.00½
October Fax	1.90¼	1.88½	1.90⅜	1.92¾	1.93¼	2.12⅞	2.05	2.07½	2.11	2.13	2.08½	2.03
December Fax	1.77	1.75	1.75	1.77½	1.78¼	1.91	1.84	1.87	1.91¾	1.93	1.88	1.84½
May Flax	1.82	1.81	1.84	1.84½	1.84½	1.93	1.90	1.92	1.96	1.97	1.94½	1.87
October Rye	0.68⅝	0.67⅝	0.67¼	0.68⅞	0.68¾	0.75½	0.70	0.70⅝	0.70⅜	0.71⅞	0.70	0.67¾
December Rye	0.66¼	0.65⅝	0.65	0.65⅝	0.65⅝	0.69¼	0.66¾	0.67½	0.66¾	0.69½	0.67⅛	0.65½
October Barley	0.53½	0.55⅛	0.52⅞	0.52¼	0.52⅜	0.58½	0.54	0.55	0.55	0.56⅝	0.55	0.53
December Barley	0.51¼	0.50½	0.50½	0.50	0.50¼	0.53¾	0.52	0.53	0.52⅝	0.54	0.52⅛	0.50⅝
May Barley	0.43½	0.43½	0.43½	0.43½	0.43½	0.43½	0.42½	0.42½	0.42½	0.42½	0.42½	0.42½
October Oats	0.41½	0.41¼	0.41⅛	0.41⅝	0.41⅜	0.45½	0.42½	0.43⅞	0.43½	0.45	0.44½	0.43
December Oats	0.38½	0.38⅛	0.37⅞	0.38¼	0.38	0.40¾	0.39	0.40	0.40	0.40¾	0.39¾	0.38½
May Oats	0.41¾	0.41⅜	0.41⅛	0.41⅞	0.41⅝	0.43⅞	0.42¼	0.43	0.43⅛	0.43⅞	0.42¾	0.41⅞

Foreign Flour and Grain News

THE long-expected improvement in the export flour market would appear during the past two weeks to have set in in earnest. Foreign buyers evidently feeling that prices, which are now within 25 or 50 cents of their pre-war level cannot possibly go lower, are cabling bids which millers, in view of the downward tendency of the wheat market, are finding it satisfactory to accept. Reports from Winnipeg, however, indicate that quoted prices are not the lowest at which export business is being done, but that some of the mills are closing deals with British and other foreign importers at prices which when applied to large orders such as those said to be being filled are representing good profits.

In the grain market heavy exportations of wheat to France, which has a reduced crop yield this year, have been a recent feature. During the three months ending September 21, exports amounted to 426,000 bushels as against 208,000 bus. for the corresponding period of 1921. Owing to the decline in wheat prices, however, the value of the exportations show but little difference, those for the three months of 1921 being $610,000, and those for the three-month period of 1922 being but $613,000. By way of contrast exports of wheat flour to France during the present year have been one barrel. The reason for this is the post-war rehabilitation and expansion of the French flour milling industry.

INDIA.—The monsoon is reported to have weakened in Western India. Seeding of wheat and linseed generally commences in September in the early districts and continues to December and even to January in the Northern regions.

ROUMANIA.—Undoubtedly the hot weather of July had a very damaging effect upon the crop, but the recent rains have been beneficial. Hot, dry weather is now prevailing. The Government's proposal to requisition wheat has raised such a protest that the advisability of raising the fixed maximum price is being considered.

ARGENTINA.—Persistent rains have caused floods in the Buenos Aires and Rosario regions, but in the West and South frost has improved the condition of the crops. Maize deliveries are still being delayed by unfavorable weather. The weather is now fine.

AUSTRALIA.—Cable advices state that general rains are required throughout the Commonwealth, while in New South Wales fully 50 per cent. of the acreage is lacking sub-soil moisture. The shipping surplus of the Commonwealth is now about 2 million bushels.

FRANCE.—Recent harvesting in the Northern and Eastern departments was interrupted by frequent heavy showers, which cannot but have an adverse effect upon the quality of the grain. The lateness of the harvest and the exceptional irregularity of the yields are causing wide diversity of opinion as to the total cereal production this year. There is a notable disinclination on the part of leading commercial authorities to make quantitative estimates, although with respect to wheat, there is general agreement that the total production will be appreciably below that of last year. The latest private estimates of the wheat outturn range between 27,000,000 and 34,000,000 quarters, as compared with 41½ million last year. The yields of barley and oats are placed at 25 per cent. above those of last year. Rye is an average crop.

GERMANY.—The yields of all cereal crops are officially stated to be below those of 1921. Weather conditions have not been a together favorable for the harvest, but recently it has turned brighter and a good proportion of the wheat and oats crop has been brought in. The quality of the grain varies considerably, but it is undoubtedly below that of last year.

ITALY.—The weather continues generally dry, but heavy thunderstorms have been experienced locally. Maize continues to receive most unfavorable mention.

AUSTRIA.—Harvesting has now terminated, but only a small proportion of the new crop has yet been threshed. Arrivals and offers are consequently small.

JUGO-SLAVIA.—The heavy export duties on cereals which are now being enforced have naturally caused a considerable curtailment of grain exports. Prices of native cereals have fallen sharply, but the peasants are now holding their grain, and millers contemplate importing foreign wheat, the import duty on which has been temporarily abolished.

HUNGARY.—Owing to the protracted drought, the outlook for maize is unfavorable.

NORTH AFRICA.—There is no change to report in Algeria. Threshing returns in Morocco confirm decreased yields of wheat and barley, but the maize and Sorghum crops are satisfactory.

RUSSIA.—There is a widespread opinion that the crop now being harvested will be sufficient to cover home requirements, but transportation is in a very chaotic condition, and on this account further local distress is not at all improbable.

PORTUGAL.—A recent Government Order prescribes Regulations for the classification and control of maize flour designed with the object of preventing the export from the Territories under the administration of the Mozambique Company of such flour not of good quality. No maize flour will be accepted by the Custom House for export unless accompanied by a certificate of the Department of Agriculture attesting that it has fulfilled the prescribed conditions as to quality. Under the Regulations and a further Government Notice, maize and maize flour containing more than 12 per cent. of moisture may not be exported from the Company's Territories.

ITALY.—Bran pollard and other by-products of flour milling may now be exported from Italy without the requirement of an export license. The 1922 Italian wheat crop is estimated at 162,404,000 bushels. This figure compares with 188,000,000 bushels a year ago, and 141,000,000 two years ago.

SERBIA-CROATIA.—In virtue of a recent Decision of the Ministerial Council the import duties on all kinds of wheat, buckwheat, rye, barley, oats, and maize imported into the Kingdom have been withdrawn as from 18th August last.

The Elevator Operator

CONFERRED ON HANDLING OF 1922 CROP

Ottawa.—Plans for handling the great grain crop of western Canada were discussed recently at a conference between the members of the Board of Grain Commissioners of Canada and Hon. J. A. Robb, Minister of Trade and Commerce. The opinion was expressed that unless the crop proved considerably bigger than was anticipated it could be handled without difficulty in view of the increase in railway facilities and of elevator accommodation at Fort William and elsewhere.

It is understood that the conference gave some attention to the problem of controlling the operations of grain mixing houses. The subject of storage rates in country elevators was also discussed, and, it is said, a schedule of rates for special binning and graded storage binning will be prepared. The conference was attended by all the members of the Grain Commission, Chairman Leslie Boyd, and Messrs. Matthew Snow and James Robinson, and by Secretary R. Hetherington.

RAPID GRAIN LOADING AT MONTREAL

The Montreal Harbor Commissioners' new extension jetty at elevator No. 2, especially constructed for the speedy loading of tramp grain steamers, was put into operation for the first time recently, when grain was supplied to the steamer "Grainton." The first of the four belts with which the jetty is equipped commenced work at 8.30 a.m., and continued unaided until 4 p.m., when the second belt was put into commission. The belt handling system is convertible and will permit three or all of the belts to be used to load one steamer, when necessary. This notable addition to the present facilities of the port is expected to prove a great assistance during the present rush of Canadian grain, by providing berths where tramp vessels may load expeditiously without occupying the berths of regular liners.

GROWERS NOW PRACTICING HEDGING

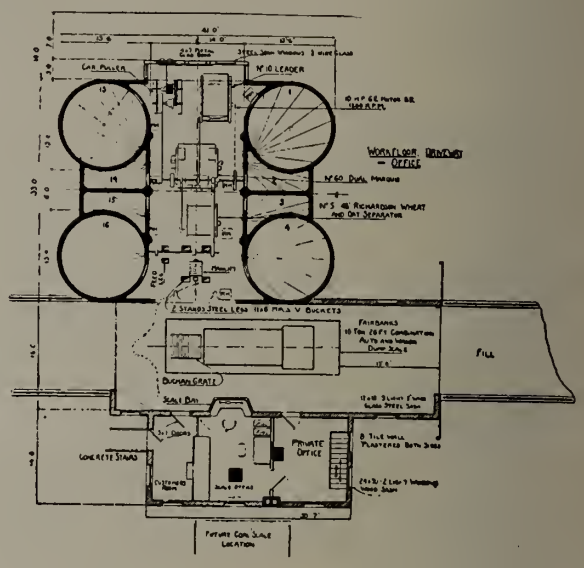
Winnipeg.—A feature of the markets this fall, said a prominent broker recently, has been the continued extensive use of the machinery of the exchange by the grain growers to hedge their products.

While there has always been a certain amount of this going on in the exchange, the volume this fall has exceeded by a great percentage any previous record. Every morning there is a flood of orders for hedging in odd cars from the country.

Fires in country elevators are being reported in increasing numbers, indicating that the season's heavy rush of grain to market is well under way, as well as a widespread carelessness on the part of the management of elevators as to watching the generally known fire hazards. This should remind operators who desire to sidestep being put out of the grain game for a number of months that they should keep a watchful eye on their elevator property, thus avoiding not only the loss of business but the "high cost of building" as well.

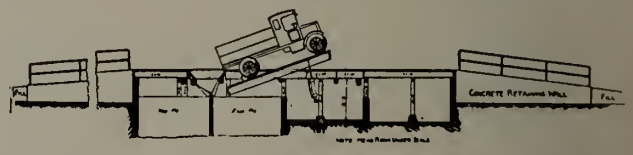
AN EFFICIENT EXAMPLE OF CONCRETE CONSTRUCTION FOR COUNTRY GRAIN ELEVATORS

The possibilities of reinforced concrete in the construction of a country elevator are well exemplified in the 50,000 bushel elevator at Forbes, N. Dak., designed and built for the Forbes Equity Exchange by the Hickok Construction Co., Minneapolis, Minn. The accompanying plans show the bin arrangement, work floor space, foundation, dump, mill floor plans



and equipment. The elevator structure is entirely of monolithic reinforced concrete construction, including all floors, roofs, pit hoppers and partitions. Legs and spouting are of steel, windows are steel sash with wire glass. The only wood is in the cleaning machines, the service and ground feed bins and in the short feed legs of the attrition mill. These items do not contain enough lumber, should it burn, to damage the concrete floor or walls, as all the reinforcing steel is covered with not less than ½ inch of concrete.

The walls of the driveway and office of the Forbes elevator are of tile, plastered with cement, the roofs and supporting beams are of monolithic concrete. The only wood used in this part of the

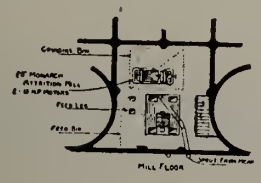


building is in the heavy timber frame and deck of the dump scales and in the driveway floor, all slow burning construction. The office floor is of wood for necessary comfort. The office millwork and finish is also of wood.

The layout of the plant provides for all the conveniences and flexibility provided in the best types of wooden elevators. On the first floor is space for

The Elevator Operator

three cleaners and a car puller. Power for these machines is supplied by a 10 H. P. motor inverted and bolted to the ceiling. The work floor is extended on the track side, adding to the length of the floor and providing a look out bay for observing cars

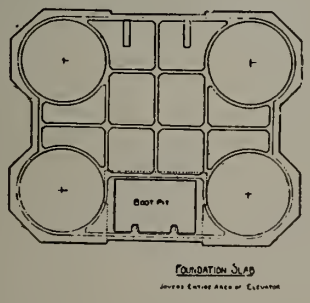


when moving them. A floor above the work floor provides space for a 20" attrition mill with service bin, feed bin, scalper and magnetic separator.

The 20 bins in the elevator all have self cleaning hopper bottoms. Eight bins are of carload capacity and spouted to the cleaners, while grain from 4 bins of half carload capacity, above the mill floor can also be drawn to the cleaners by transfer spouts. In case it is desired to install the attrition mill in a separate building, the mill story can be used to great advantage for a cleaner.

Below the work floor are six cleaning pits, with total capacity of 1,500 bushels. One pit next the track side is used to receive grain from cars, transferring to the legs with a conveyor. The large capacity of the pits make it possible to take care of the clean grain and screenings and at the same time receive and ship with only two stands of legs. Each of these legs has a capacity of 2,000 bushels per hour. When shipping about 80 per cent. of the capacity can be spouted to the legs for elevation without interfering with the cleaning pits.

The two wagon receiving pits have a capacity of 400 bushels each. A valve at the dump sink directs the grain to either pit.



The steel manlift drops below the first floor into the boot pit, making it convenient of access. The concrete pit walls run to the first floor so that a great deal of dust is kept from the boot pit.

In swabbing wind trunks it is necessary to drag the swab back and forth. To do this have a rope twice as long as the wind trunk; tie the swab in the middle, and you can pull it back and forth as often as necessary.

Correspondence

"Canadian Milling & Grain Journal" has received many expressions of approval on the timeliness of its article on page 23, issue of September 1, last, entitled "The Value of Concrete as a Safeguard Against Fire in Elevator Construction." Without exception these expressions agree with the opinion held by this Journal that, although naturally more expensive than other materials the economy effected through its use by elevator operators, not to mention the importance of conserving Canada's food supply as a large share of that of other nations, demands that replacements in elevator construction, as well as all new undertakings, should be of concrete.

The following communication, dealing in a subtly humorous fashion with the subject of the use of concrete in grain elevator construction, emphasizes in an unmistakeable manner the need for such.

The Editor, "Canadian Milling & Grain Journal",—

Dear Sir,—In your issue of September 1st, Vol. III., No. 15, there appears an article entitled, "The Value of Concrete as a Safeguard Against Fire in Elevator Construction." If the article had referred to terminal elevators only, it would have been in order, but to suggest the use of concrete in the construction of country elevators is reaching out too far ahead of the present day.

The West is young yet, and what finer historic landmarks could be left for future generations to admire than the old-time, speedily-constructed, ramshackle wooden elevators, with their primitive interiors, thickly accumulated dust, dirt and grime, and, more interesting still, the vast families of rats, mice and such small things, which the country elevator so wonderfully provides for. The fact that country elevators of wood construction are a heavy fire hazard is decidedly in their favor, necessitating the employment of numerous insurance officers to supervise them, thereby promoting business. There is also great benefit drived by the operators of wooden elevators. The sagging of timbers and comfortable settling down of these structures more often than not throws machinery out of line, and also interferes with the tightness of the bins and spoutings, causing grain to leak here and there all over the elevator. These trivial occurrences create work for the operator, which helps to fill in his time when handling grain in the fall of the year. Any vibration in the machinery in elevators of wood construction is, too, a tonic to elevator operators.

Let us continue to have the wooden country elevators. They have handled millions of bushels of grain during past years, and are continuing to give efficient service. If, by any chance of fate, an odd one here and there burns down, by all means let it be reconstructed—in less than sixty days, if possible. Unlimited resources of timber remain, and we need not concern ourselves with the question of conservation of our forests—this can be very simply taken care of by future generations of wise men.

"AN INTERESTED READER."

Elevator, Mill & Personal Notes

Leader, Sask.—Mr. J. S. McLeod's and the Central elevator, three grain cars and 2,000 bushels of grain, were destroyed by fire here recently. The loss is estimated at $22,000, with some insurance on the elevators.

Dundas, Ont. — Fire starting from unknown causes recently destroyed the plant of the Colville Feed & Milling Company, Ltd. The loss, estimated at $125,000 is covered by insurance to the extent of about sixty per cent. Hon. F. C. Biggs, Minister of Roads in the Ontario Government, is president of the company.

Fort William, Ont.—The Ogilvie Flour Mills Co., Ltd., were represented in an attractive booth at the recent annual fall fair of the West Algoma Agricultural Association. The company exhibited examples of their well-known Household Flour, Rolled Oats and Poultry Feeds, which are manufactured at their local mills.

Fort William, Ont.—The Fort William Sample Market and Produce Exchange, has secured a charter of incorporation without share capitalization, the object of which is to promote and maintain without pecuniary gain an association for the advancement of trade and commerce in the interests of the grain producers of Western Canada, and for the general benefit of Canada. The new company is also given power under its charter to compile records and publish statistics, and to promote, maintain, and operate facilities for sample market trading in grain, produce and provisions at Fort William.

Fort William, Ont.—The Barnett & McQueen Construction Company have concluded their work in connection with the erection of the two million bushel capacity annex to the Northwestern Elevator, and work is now being rushed on the installation of the machinery so that the added capacity may be made available for handling its share of the 1922 crop with as little delay as possible.

Mennon, Sask.—Nervy cracksmen recently blew open the safe of the Quaker Oats Company elevator here and got away with three thousand dollars in cash.

Toronto. — Provincial Flour Mills, Limited, capital stock has been increased from $500,000 to $1,100,000 by the creation of twelve thousand second preference shares of fifty dollars each.

Toronto.—Peerless Cereal Mills Co., Limited, have been authorized to acquire, hold and assure land in mortmain in Ontario to the value of $10,000 necessary for its actual use and occupation, or to carry on its undertaking.

The Morse Chain Company, of Ithaca, N.Y., recently installed Chain Drives totalling 7,000 h.p. in the Northern Central Elevator at Baltimore, Md., owned and operated by the Pennsylvania Railway System. This is the largest installation of Chain Drives in any grain elevator in the world, and is one of many elevators both in Canada and the United States equipped throughout with Morse Chains, several of these approximate in h.p. the one referred to above.

Mr. Archie Bruce, who was formerly connected with the staff of the Government Terminal Elevator at Fort William, Ont., and who has spent the past two years in the Argentine, has returned to Winnipeg recently, and was warmly welcomed by his many friends in the grain trade. Since his return Mr. Bruce has been appointed superintendent of the Gillespie Terminal Elevator Company, Ltd., at Fort William.

Mr. C. L. Hall, who has been local manager for the United Grain Growers' elevator at Alliance, Alta., for the past year, has moved to Vancouver, where he will in future reside.

Brig.-Gen. A. E. Labelle, vice-president and general manager of the St. Lawrence Flour Mills Co., Ltd., and president of the Canadian National Millers' Association, returned to Montreal recently with his family from his summer home at Vaudreuil, P.Q.

Mr. Leslie H. Boyd, K.C., chief commissioner of the Dominion Board of Grain Commissioners, Fort William, Ont., spent some days in Winnipeg recently.

Mr. J. P. Kenny, who has been one of the prime movers in securing a sample trading market for Fort William, notice of incorporation of which appears in the opposite column, states that as a result of the sample market he expects to gain a firm foothold among eastern and American firms who buy wheat, and who would prefer buying at Fort William on sample to buying on grade.

Mr. George Edwards, who has had charge of the Pacific Grain Company's elevator at Grande Prairie, Alta., for the past three years, has returned from a visit to western points.

Dr. W. L. McDougald, president of the Harbor Commissioners of Montreal, recently expressed the opinion that Montreal, which was already the greatest grain exporting seaport in the world, would be found at the close of the present season to have established a new record in this respect.

Mr. A. W. Alcock succeeded Mr. L. D. Jackson as chief chemist at the Western Canada Flour Mills Co., Winnipeg.

Mr. Will Hill, western representative of the Huntley Mfg. Co., with offices at 306 McArthur Bldg., Winnipeg, left recently on a trip West. Mr. Hill will cover the Northern States on his way West and return over his Canadian territory.

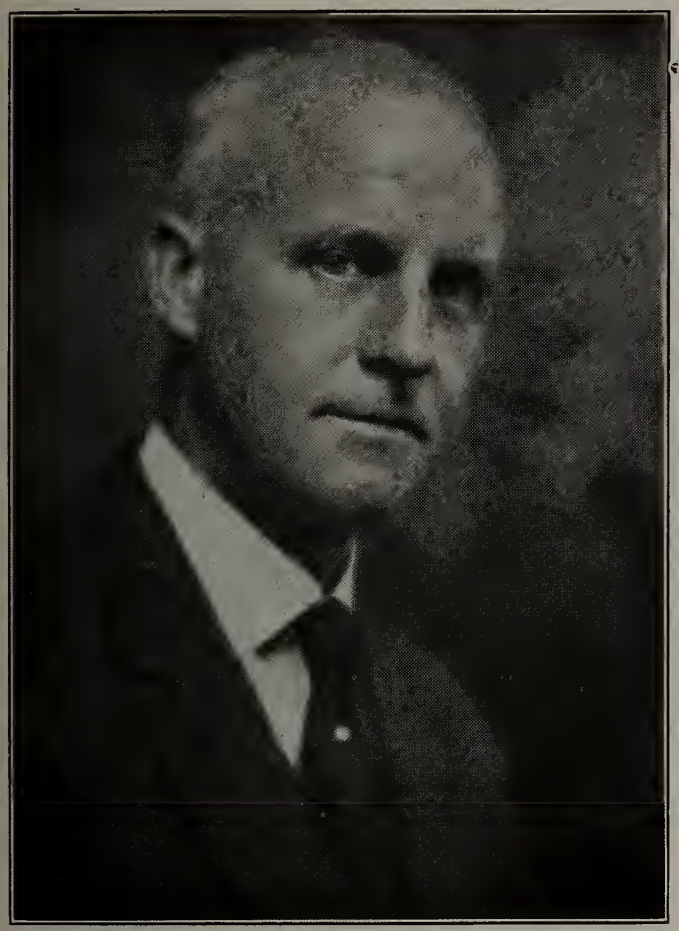
Hon. J. S. Evans, deputy minister of agriculture in the Manitoba Provincial Government, attended a demonstration of a new wheat cleaning machine at Crookston, Minn., recently. It is understood that one of the new machines will be shipped to Manitoba for demonstration purposes by permission of the United States Government, which is retaining 50 per cent. of the patent rights.

Mr. B. Wills, chemist for the Inspection Department of the grain commission, Winnipeg, recently concluded a protracted series of tests for moisture in grain at the head of the lakes.

Canadian National Millers' Association Had Successful Year

THE efforts made by the organization during the year 1921-22, the second of its existence to facilitate the development and the expansion of the Canadian flour export trade, with succinct but comprehensive references to other important activities, were featured in the annual report of the Board of Directors of the Canadian National Millers' Associa-

NEW HEAD OF MILLERS' ASSOCIATION



GEO. A. MACDONALD

Manager of the Quaker Oats Company, Peterboro, Ont., whose term of office will undoubtedly further the usefulness of the National Millers' organization.

tion at the annual meeting of that body, held in the Windsor Hotel, Montreal, on September 22nd last.

The comparatively small attendance of members was attributed to the inability of many millers to leave their plants at a time when work was just commencing on the new season's crop. The names of those present at the business meeting and the banquet will be found elsewhere in this issue of "Canadian Milling & Grain Journal."

It is quite evident, from a perusal of the annual report, that the association's year was one productive of many results of value to the members who now number 105, and who represent 72 individual mills, with a total daily capacity of 88,745 barrels, or 73 per cent. of the estimated commercial milling capacity of the country.

Besides issuing a booklet setting forth the association's views on the subject of a compulsory wheat board, to which it placed itself on record as being unalterably opposed, and which booklet was sent to all active and representative miller members as well as others interested, the association secured a revision of the Package Differentials of September 15, 1921, and which was reported on page 19, "Canadian Milling & Grain Journal," issue of September 15, 1922, and also obtained some thirty-five separate rulings on the sales tax. In some cases the executive of the association carried their appeals to the Customs' Board with satisfactory results.

Protested Graduated Stamp Tax

Steps were taken to line up eastern milling organizations to protest the graduated stamp tax on cheques and during the year the association prepared, and made arrangements to furnish members with standard sales contract, which are now being almost universally used.

The Dominion Feedingstuffs Act of 1920 came in for considerable attention on the part of the association during the year, and a special report on the subject prepared by Brig.-Gen. A. E. Labelle,

EXPLAINED WHEAT BOARD LEGISLATION

Canadian Newspaper Service Photo.

HON. J. A. ROBB

Miller-Politician and Minister of Trade and Commerce in the Federal Cabinet who, with Hon. T. A. Low, was a guest of honor at the banquet in the Windsor Hotel.

president of the association, and vice-president and general manager of the St. Lawrence Flour Mills

Co., Ltd., was submitted. The report showed that as a result of several meetings between representatives of the association, the Dominion Feed Commissioner, Mr. Geo. H. Clark, and representatives of the live stock and dairy interests, many minor difficulties and misunderstandings with regard to the operation of the act were settled to the complete satisfaction of all concerned.

The principal points agreed to by the millers at the request of the live stock and dairy interests were, that whenever the latter bought any mill offal they could be certain that same was standardized whether it contained mill screenings or not, while it was also agreed that bran, shorts and middlings should be so standardized by the mills that a live stock owner, no matter from what mill he purchased these commodities, could always be sure of obtaining the same standard of product.

The question of curtailing steamship companies latitude with regard to contracts for space and delays was taken up during the year and negotiations now in progress are expected to improve certain conditions with regard to export flour shipments to Great Britain.

Under the sub-heading of "Traffic" the association reports the results of its efforts to secure from the railway companies some relief from the high differential existing between wheat and flour export particularly for shipment ex-lakes. The railways, the report says, refused to voluntarily give any relief, and a complaint was therefore filed with the Dominion Board of Railway Commissioners, which dismissed the millers complaint. The case was taken to appeal and pending final decision in the matter a special investigation regarding the differential complained of is being made by the Federal Department of Railways and Canals. It is hoped that when a report is finally formulated and laid before the Government that there will follow the establishment of a precedent that grain products shall be given in all cases the same rates as are afforded to grain.

The Traffic Committee of the Association held three meetings at which were discussed charges for out-of-line hauls to milling points in eastern Canada and an adjustment of which was secured; and a tariff bulletin service under which association members are supplied with the least possible delay with tariff changes and revisions.

Other important matters regarding which progress was reported included milling-in-transit regulations, foreign tariffs, under which a bureau of inquiry for millers desiring to secure tariff information has been established, statistics, and the establishment of an arbitration committee. With regard to ocean differentials the report says:

"During practically the whole year, the Steamship Companies, operating out of Canadian Atlantic ports, were charging a rate for flour on the average of 5c per 100 lbs. higher than the rates prevailing from New York, both for shipment to the United Kingdom. Conferences were held with representatives of the ocean carriers and the matter was taken up with the Dominion Government, with no result until about the middle of June, when the rates were reduced to 20c, making the difference between Montreal and New York 3c per 100 lbs. We still feel that there is no reason why these two rates should not be the same."

INSPECTED BY THE VISITORS

The magnificent port of Montreal which, through the courtesy of the Montreal Harbor Commission, the millers were privileged to inspect from the decks of the Sir Hugh Allan.

NEXT PLACE OF MEETING

A suggestion put forward at the business session that Winnipeg should be the next place of meeting appeared to be generally concurred in for the reason that to gather in that city would give eastern and western millers an opportunity of meeting one another. Owing, however, to the comparatively small attendance, and the fact that there was no hurry for any decision being made, it was agreed that the secretary should take a mailed vote of the views of all members of the association regarding the western capital as the place of meeting for 1923.

Brig.-Gen. Labelle's Address at Millers' Annual Meeting

Gentlemen,—"I think we all agree that the milling business has been very unsatisfactory for the last six months, but if we seriously consider the cause, we will recognize that some of the mills themselves are to blame, and not the condition of trade.

"When we started the crop year, in September, 1921, things had come back to practically normal and there was no need of further readjustment. During 1922, exports increased and the domestic market consumed as much as ever. So it seems to me that the keen competition between mills caused all the trouble and some mills were anticipating declines all the time and persisted in selling below actual cost; this state of affairs cannot last long. If a man wants to speculate on wheat, I don't see why he should put up the money to build a mill and have the trouble of operating it; it would be cheaper to just buy and sell wheat as he feels like it, and keep his office under his hat.

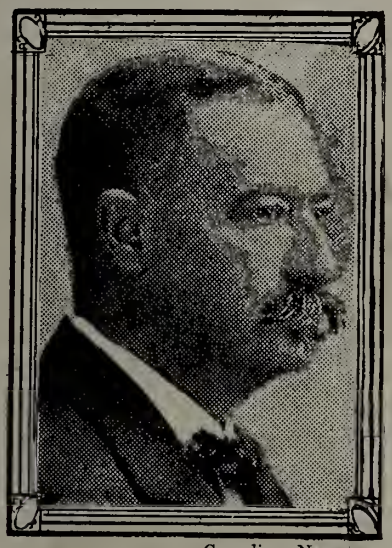
Views on the Wheat Board

"At the risk of being accussed of repeating myself too much, I wish to express the great satisfaction of all right thinking millers at the disappearance of this "nightmare" and the relief that was felt by the great majority of the citizens of Canada when it was finally discovered by those interested, that this radical piece of legislation could not be put in force. I know it is quite easy to say, after an event has taken place: 'I told you so.' Still, to the ordinary man, it looked like an impossible proposition. Every business man in this country wants our farmers to succeed and we are quite in favor of everything possible being done to improve their position provided it can be done in a sane and practical manner, but we certainly do not want any more Commissions or Government control; they were never any good to anybody. Let us hope that this question of Wheat Board is buried forever.

"I am sorry that your Board cannot report any decision yet. This is the most serious problem that the mills have to face. We must keep on working and get freight on flour on the same basis as on wheat. For months, we have been exporting flour at a loss simply due to this difference.

"You will find, in the Annual Report, full particulars of the changes. All I wish to call your

FIRST PRESIDENT OF C. N. M. A.



Canadian Newspaper Service Photo.

BRIG.-GEN. A. E. LABELLE

Vice-President and General Manager of the St. Lawrence Flour Mills Co., Limited, who completes two successful years as head of the Canadian National Millers' Association.

With a MacDonald presiding and supported at the head table at the banquet with a MacFarlane, a Black, a Hutchison, and another McDonald, not to mention Mr. Robb, the Hon. Minister of Trade and Commerce, small wonder was it that Mr. W. A. Black, president of the Ogilvie Flour Mills Co., Ltd. and a director of the Association, sprung a Scotch story that "brought down the house." The late Mr. W. W. Ogilvie it appears, paid on one occasion a visit to Constantinople, and while there called upon the Sultan. As Mr. Ogilvie was as much a stranger to the language of the Turkish ruler as that worthy was to the language of his visitor, conversation was carried on through an interpreter.

When the Sultan asked Mr. Ogilvie what his nationality was Mr. Ogilvie, presuming that the Sultan would not know from Adam what Canadian meant replied, "A Scotchman."

This puzzled the Turk somewhat, and he asked, through the interpreter, what a Scotchman was.

"Oh," Mr. Ogilvie replied, "he's a superior kind of an Englishman."

NOW FIRST VICE-PRESIDENT

International Press.

J. E. MACFARLANE

Previously 2nd Vice-President, who succeeds Mr. Geo. A. MacDonald elected President, as 1st Vice-President of C. N. M. A.

attention to is the importance of the regulation being fully followed by us. If in any crop, the chemical tests of wheat should change, the officials of the Department would be quite prepared to consider a change.

New United States Tariff

"This Tariff, recently put in force, will, I hope, put a stop to all the reciprocity talk in Canada, and is exactly what we can expect from any arrangement of that kind. The millers have repeatedly warned our different governments that any reciprocity pact would remain in force only as long as it was in favor of the United States. We want the question to be taken out of politics and settled once and for all. But industries cannot prosper on half free trade and half protection; it has either to be one or the other. You have all just been advised that duty on Canadian bran has been increased from 10 to 15 per cent.

"Some members, and in some cases, millers who have not yet joined, but which we hope to have with us some day, have often told me that they thought our Association was not doing much, as they saw very little about it in the papers. Let me assure you that they are mistaken; we have done a great deal and expect to do a great deal more, but we think it wise not to advertise it. Members are notified of all changes and results, and our energetic secretary is always ready to answer at once any enquiries that may be made, and if you will read over carefully the annual report and see what has been done during the year, you will find that a lot was accomplished.

"Let me express the wish that the present pessimistic feeling which I, as President of the Association, had probably occasion to see more than anyone else in some millers, will entirely disappear now. Why should millers have any such feelings? Do we not represent one of the largest industries in Canada, both as to capital and production? As a matter of fact, in a year, when the majority of this country's industries are not yet back to normal, we are able to show an increase in our export of 990,000 barrels. We have an unlimited supply of the finest wheat on earth; Canadian flour is known and appreciated in every country in the world. The only trouble we have is an internal one; we don't have enough confidence amongst ourselves. Now, when I look around this room and see those present,, and think of a great many others who are prevented from being here, I see men of the highest calibre, men who have all a splendid reputation of business enterprise and integrity and who command the respect of everyone of their fellow citizens, who come in contact with them. Surely, these men do not turn out all wrong because they meet other millers. Such a feeling is bound to disappear as we get to know one another better.

Brighter Times Are Coming

"These dark days are bound to be followed by bright ones; there is no reason to expect anything else but a good year, and those of us (I now speak as president), who have deviated from the safe path, will very soon come back to it, finding that after all good sound business principles are the only ones to lead to success.

"This Association has a lot of work to accomplish. We have rectified many evils, but there are still enough left to keep us busy. We want more members to make our efforts more effective.

"In conclusion, let me thank you all, directors and members, and last but not least, our young and active secretary, for the co-operation you have all given me during the past two years, which years will always remain as the most interesting of my business career."

MR. GEORGE A. MACDONALD, OF PETERBORO, NEW HEAD OF C. N. M. A.

At the conclusion of the reading of the annual report and financial statement and the retiring president's address at the morning session of the second annual meeting of the Canadian National Millers' Association, the nomination of officers and their appointment for the year 1922-23 resulted in the election to the presidency by acclamation of Mr. George A. MacDonald, of the Quaker Oats Company, Peterboro, Ont. Mr. J. E. MacFarlane, of the Western Canada Flour Mills Co., Ltd., was re-elected vice-president and the vacant vice-presidency, created by the election of Mr. MacDonald, was filled by the election of Mr. J. A. McDonald, of McDonald and Robb, Valleyfield, P.Q. Mr. F. C. Cornell, the genial and energetic secretary of the Association was, with the other officers re-elected by acclamation.

The new board of directors of the association is composed of Messrs. W. A. Black, Ogilvie Flour Mills Co., Ltd.; J. E. MacFarlane, Western Canada Flour Mills Co., Ltd.; J. A. McDonald, McDonald-Robb, Valleyfield, P.Q.; G. A. Gray, T. H. Taylor Co., Ltd., Chatham, Ont.; J. E. Hall, Vancouver Milling and Grain Co., Ltd.; C. R. Hunt, Hunt Bros., Ltd., London, Ont.; W. W. Hutchison, Lake of the Woods Milling Co., Ltd.; A. C. McLeod, McLeod Milling Co., Ltd., Stratford, Ont.; C. Ritz, Robin Hood Mills, Ltd.; R. A. Thompson, Lynden, Ont.; C. B. Watts, Dominion Millers' Association, Toronto; W. B. Woods, Dominion Flour Mills, Ltd.

As they were desirous of being able to avail themselves of the valuable services of their retiring president, Brig.-Gen. A. E. Labelle, the meeting resolved to change the by-laws of the Association to allow of the election of retiring presidents as ex-officio members of the board of directors.

One of the matters dealt with at the meeting was the resignation from the Association of the Maple Leaf Milling Co., Ltd., which was represented on last year's board of directors by Messrs. D. A. Campbell and J. S. Barker. It was decided that as there had been no executive committee meeting held since the resignation was received that same should not be accepted, and that in the meantime efforts should be made to endeavor to have the Maple Leaf Company remain in the organization. With this hope in view it was decided to leave a vacancy on the board of directors.

Following the acceptance of the report of the board of directors Brig.-Gen. Labelle, the retiring president, referred in a brief address to the members to the trying times through which the milling industry had but recently passed. He did not hesitate to say, however, that some of the millers had only themselves to blame for their troubles. He looked to the future with confidence however, and saw no cause for pessimism.

The text of Brig.-Gen. Labelle's address will be found on pages 25-26.

MINISTER OF TRADE AND COMMERCE EXPLAINS WHEAT BOARD LEGISLATION

The reasons why the Government felt impelled to grant the request of the western grain growers for the establishment of a Wheat Board was the main topic of the address delivered by Hon. J. A. Robb, Federal Minister of Trade and Commerce at the banquet which brought to a happy conclusion the second annual meeting of the Canadian National Millers' Association. The minister, not alone because of the fact that he is himself a miller and therefore can appreciate the problems of the industry, but because of his frank and open explanation of the Government's policy at once established himself with his hearers, and the sincere applause with which various points of his excellent address was greeted, left no room for doubt as to the sympathetic feeling of his audience.

One of the happiest events of the day occurred at the banquet at the Windsor Hotel in the evening when Brig.-Gen. A. E. Labelle, vice-president and general manager of the St. Lawrence Flour Mills Co., Limited, was presented by the board of directors of the Canadian National Millers' Association with a handsome platinum watch as a mark of appreciation for his splendid work during his two year term of office as president of the organization. Having been the first head of the Association, it is largely as a result of Brig.-Gen. Labelle's efforts that the Association occupies the important position it does to-day in regard to the Canadian milling industry. The popular ex-president's surprise was complete. His well chosen words of thanks were followed by the enthusiastic singing of "For He's a Jolly Good Fellow." And he is.

"Canada could not afford to have a discontented West, and so the Wheat Board was passed. And I know," Hon. Mr. Robb said at the outset of his remarks, "that the wheat board legislation was far from popular with the millers. But let me say this to you; I say it frankly and honestly; the wheat board bill was put through not to hurt the millers, but to help the farmers. I believe there were men in Parliament supporting the wheat board who had doubts as to its value, but the grain growing provinces wanted it. Members of Parliament from city and country of three prairie provinces were, in so far as their voices were heard in Parliament, unanimous for a wheat board. In face of such apparent unanimity, it was in the best interest of Canada that we should send those members back without a grievance, real or imaginary.

"The people of Canada," continued the minister, "desire a united and contented citizenship. Can we have union and contentment if even but one member of the family nurses a grievance? To-day the West has no wheat board, for the powers Parliament granted are not used; but the West is happy, contented and confident. Is that not worth while? Is it not a good thing for the millers of Canada, for the largest manufacturing industry of this country, that the men who produce your raw materials are now happy, contented and confident; already at work preparing the seed bed for next season's crop. Surely the millers and the farmers, grain growers and stock raisers may be classified as allied industries."

The Minister of Trade and Commerce pointed out that the milling industry stands first in value of production in this country, running about $250,000,000. The Canadian milling industry is a Canadian-owned industry, in that its securities are almost entirely held in Canada. In money the mills represent a sum of over $70,000,000, and employment is given to over 7,000 men, while the wages total over $8,000,000 a year. The total capacity of Canadian mills is approximately 134,000 barrels per day. The largest flour mill in the world, having a capacity of 14,000 barrels per day, is owned in Canada.

Mr. Robb reviewed the history of flour milling in Canada from the earliest times, and pointed out that this industry, together with the saw milling and boot and shoe industries, had remained the most important in the Dominion. The growth of flour exports would be appreciated when it was realized in 1898 $5,000,000 worth was sent out of the country, and that in 1920 a total of $94,000,000 was sent away. He prophesied that these figures might easily double in the next ten years to come. He lauded the principle of supporting purely Canadian industries, and referred to the restrictions on wood pulp, which meant that the pulp industry in Canada had grown by leaps and bounds.

Hon. Mr. Low on the Railways

Hon. Mr. T. A. Low, minister without portfolio, emphatically declared with regard to the Government's railway policy, that it was the intention of the administration to give public ownership a fair

A REAL LIVE SECRETARY

F. C. CORNELL

The active and efficient Secretary of the C. N. M. A., who was indefatigable in his efforts to make the meeting the success it was.

felt sure that public confidence would be restored. He intimated very strongly that the men who had been chosen to run the people's railways would not be men bigoted by political partnership, but that they would endeavor to place the national lines in a position that they could compete with such a successful railway company as was the Canadian Pacific.

Hon. J. A. Robb, Federal Minister of Trade and Commerce, who, with Hon. T. A. Low, minister without portfolio, came down specially from Ottawa to address the millers, was moved by the predominance of the Scotch element present to preface his excellent speech at the dinner with a story well worth repeating.

A Scotchman it seems, had travelled from Shanghai to an Australian port and at every place touched en route he had found the principal high positions held by Scotchmen. This, of course, did not surprise him, and when he reached Australia the first thing he asked a native upon landing was whether there were many Scotchmen in Australia.

"Oh yaas," replied the native, "but our worst pests are the rabbits."

The minister paid a tribute to the prime minister, Rt. Hon. W. L. Mackenzie King, whose sound judgment and speedy action, he averred, had prevented the Nova Scotia coal strike from becoming much worse than it was.

Mr. G. A. MacDonald, the new president of the association, presided. Associated with him at the head table were Hon. Messrs. Robb, and Low, Messrs. W. A. Black, Ogilvie Flour Mills, Montreal; C. R. Hunt, Hunt Bros., Ltd., London, Ont.; J. E. MacFarlane, Western Canada Flour Mills Co., Ltd.; C. Ritz, Robin Hood Mills, Limited; Brig.-Gen. A. E. Labelle, St. Lawrence Flour Mills Co., Ltd.; J. A. McDonald, McDonald & Robb, Valleyfield, P.Q.; R. A. Thompson, Lynden, Ont., and W. W. Hutchison, Lake of the Woods Milling Co., Limited.

Among others present were noted Messrs. F. C. Cornell, secretary of the Association, and to whose efforts much of a highly successful day das due; A. C. McLeod, McLeod Milling Co., Ltd., Stratford, Ont.; B. H. Meyers, Peterboro Cereal Co., Ltd., Peterboro, Ont.; G. M. Shirk, Shirk & Snider, Ltd., Bridgeport, Ont.; W. C. Sylvester, W. C. Sylvester & Sons, Vankleek Hill, Ont.; W. Weeks. Ogilvie Flour Mills Co., Limited; G. A. Gray, T. H. Taylor Co., Ltd., Chatham, Ont.; C. B. Watts, Dominion Millers' Association, Toronto; D. S. Thornton, St. Lawrence Flour Mills Co., Ltd.; F. H. Peck, Maple Leaf Milling Co., Ltd., Montreal; Lincoln Goldie, Jack Marshall, Montreal manager for the Western Canada Flour Mills Co., Limited, and T. F. McNally, Lake of the Woods Milling Co., Limited.

INSPECTION OF MONTREAL HARBOR A REVELATION TO VISITING MILLERS

Through the courtesy of the Montreal Harbor Commission the sturdy tug Sir Hugh Allan was placed at the disposal of the Association for a tour of the harbor during the afternoon of the day of meeting. Leaving the foot of McGill street at 4 o'clock, after all present had submitted to facing the camera, the Sir Hugh Allan slowly proceeded past the various wharves at which many ships were taking grain cargoes from the big elevators. An excellent view was had of the tremendous pro-

SPOKE ON RAILWAY SITUATION

Canadian Newspaper Service Photo.

HON. T. A. LOW

Minister without portfolio in the Federal Cabinet who, with Hon. J. A. Robb, was one of the guests of honor at the millers' banquet in the Windsor Hotel.

gramme of development now being undertaken by the harbor commissioners and undisguised surprise was expressed by many of the visiting millers who had never before had an opportunity of seeing Montreal's shipping activity.

At Maisonneuve the visitors inspected the "Duke of Connaught" drydock, Brig.-Gen. Labelle, who is a former member of the Montreal Harbor Commission, describing how the monster structure was towed across the Atlantic by Dutch tugs, some ten or twelve years ago.

On the return trip an informal luncheon was served, during which "Jimmy" Rice entertained with song and story in his own inimitable way. "Jimmy" was a member of the famous Canadian Concert Party which did so much to make pleasant the hard work of their comrades in France during the big war.

Owing to the unavoidable absence of members of the Harbor Board, some of whom had hoped up to the last moment to be able to come, Brig.-Gen. Labelle acted as host and acquitted himself of his duties in a manner that left nothing to be desired. Mr. F. C. Cornell, secretary of the association, was also indefatigable in his efforts to ensure the comfort of the visitors.

PRES. G. A. MACDONALD PROMINENTLY IDENTIFIED WITH MANY BRANCHES OF MILLING INDUSTRY IN CANADA

To many people the word miller is associated only with the manufacture of flour. When it became known, however, that Mr. Geo. A. Macdonald, manager of the Quaker Oats Company, had been elected President of the Canadian National Millers' Association at the annual meeting in Montreal recently, the scope of the membership and functions of the Association became more apparent.

The Quaker Oats Company, while known best as manufacturers of cereal products, are also among the largest flour millers in Canada. Their mills have a capacity of 4,000 barrels a day and the new President of the Millers Association has been a vital and forceful asset in building up this business.

Born in Edinburgh, Scotland, just so many years ago, Mr. Macdonald comes naturally by his excellent taste for cereals and skill in manufacture. As manager of the Quaker Oats Company, he is responsible for the manufacture as well as the sale of the Quaker products, which besides Quaker Flour and the better known Quaker Oats, include Tillson's Oats, Tillsons' Scotch Health Bran, Puffed Rice, Puffed Wheat and a nuber of other cereal specialties.

With Mr. Macdonald as the head of the Canadian National Millers' Association, it is safe to predict that this important body will maintain and increase its prestige and usefulness in the industrial and commercial life of the country.

ECHOES OF THE MEETING

Only one visiting miller—we will be kind and not mention his name—was heard to ask how cash wheat was. He was nearly dumped in the harbor for daring to talk "shop."

* * *

When Brig.-Gen. Labelle was presented with his magnificent platinum watch he facetiously remarked that it would be a fine timepiece to check up the arrival of tardy directors at meetings.

* * *

Vice-President W. A. Black, of the Ogilvie, is an after-dinner speaker of a high order. He has a keen sense of humor, too, the existence of which many of his miller friends did not suspect.

* * *

Considering that they meet but once a year the choruses in which all joined during the after-dinner sing-song were not too r.... bad.

* * *

Two-two-nine added makes thirteen. But millers ain't afraid of any jinx, at least not that one could notice.

* *

The plaintive expression of one visitor, "An' we have to go back to-night," emphasized better than a volume of platitudes just what a splendid time every one had.

* * *

In this regard the opinion was expressed that the holding of the annual meeting at an earlier date might be productive of a better turn-up of members, particularly those representing mills outside of Quebec and Ontario.

The only weak spot of an otherwise most successful meeting was the attendance.

* * *

Had the weather been ordered a month in advance it could not have been more favorable than that which prevailed for the harbor trip.

* * *

The business meeting was a business-like one. Not a moment too long, yet sufficiently long to permit of the proper transaction of what had to be done, and everything went off like clock-work.

* * *

Where "Jimmy" Rice, who entertained on the harbor trip, at the dinner, and in between-times, gets his stories is a wonder, but how he remembers them is a greater wonder still.

* * *

Millers from "west of Toronto" are a real "breezy" lot. They came down to enjoy themselves and they did.

Rufus Redd Dogg

"B' me gran' father's two-bearded goat but I'd a been madder 'n a hornet with 'Tilda ef ever I missed them doin's down t' Montreal," exclaimed Rufus as he borrowed a chew from Bud Enderby explaining that his trip had left him broke. Urged by instinct rather than by direct verbal invitation to continue, Rufus said.

"Yes, sirree. . . . Fr'm th' momint I landed 'n both feet 'n th' big burg till I med a runnin' lep f'r th' train t' hum ther wuz sum'thin' doin'. Th' meetin' itself which wuz ez short ez Lem Bellows idea 'f honest weight went off with military precision so t' speak. Et wuz a reg'lar luv feast, an' here wuz I expectin' t' see a scrap thet 'd make th' Kilkenny cats luk ez 'f they wuz paralized.

"Arter takin' a pikshure 'f th' bunch presoomably f'r identification purposes, suppos' we wuz to get lost, stolen 'r led astray, we wuz taken down th' river an' I will say thet et 'd make Squaw Crick look like small pertaters. Incidentally, I think thet th' ability t' make visiturs feel t' hum must be a qualification f'r appointment t' th' harbor commission. They shure did things fine.

Outside 'f th' ellyvators down be th' river, th' dinner an' a swell bound edition 'f th' fe-male spechies who wuz squattin' 'n th' Court 'f Honer et th' hotel an' who wuz absorbin' sum'thin' through a straw pipe fr'm a tin colored mug, th' thing thet attracted me most wuz th' willin'ness 'f th' big fellers et th' meetin' to talk t' th' little fish. Why, they wuz real sociable.

"Th' only speck 'n th' flour t' me th' whul day I think wuz th' discovery thet I'd missed sum'thin' at th' dinner f'r I hed two spoons 'n a fork lef' over when th' debree wuz taken away.

"An' by th' way, them burds fr'm west 'f Trawnto must be doin' a howlin' business. Et least et seemed theta way t' me ez they wuz allus been called t' a con'frence with sum gazeboo named Walker 'n whose tellyfone number seemed t' be Cum-Up 229. He wuz busy, I'll say he wuz," concluded Rufus.

THE PRACTICAL MILLER

THE BLEACHING OF FLOUR*

There are to-day three different reagents used for the bleaching of flour as follows: nitrogen peroxide, chlorine and nitrogen trichloride. All of these are in gaseous form and all applied to flour in a similar way, that is by bringing a current of the gas into contact with flour in one of several types of agitators. I am not going to spend any time in describing in detail how the gas is applied to the flour for this is a process with which you are all familiar.

What Nitrogen Peroxide Does

We will start with the process in which nitrogen peroxide is the active agent. This gas serves to whiten flour, destroying some of the yellow coloring matter. The percentage of ash, moisture, protein, water, soluble protein, gliadin, and acidity are not effected. Neither is there any colloidal change effected in the proteins according to the viscosity determination made on flour untreated and on flour treated with nitrogen peroxide.

The hydrogen ion concentration is increased slightly, showing some slight oxidation.

The fermenting period of flour treated with nitrogen peroxide is the same as that of flour with no treatment.

Comparing loaves of bread made from flour treated with nitrogen peroxide and that made from flour which has had no treatment, we find the bread made from the treated flour to be the whiter; we have found no difference in the volume or texture. We have been unable to confirm the claim that treatment with nitrogen peroxide gas acts the same as natural aging, excepting the item of color.

Chlorine Bleaching and Its Effects

The next reagent to be considered is chlorine. Treating flour with chlorine effects very definite chemical changes, as follows: an increase in acidity, an increase in the hydrogen ion concentration, an increase in the percentage of soluble proteins, and a slight but consistent decrease in the percentage of gliadin. The colloidal condition of the proteins is also effected as is shown by viscosity determinations, using both water and dilute acids for making the dilute dough solutions used in this determination. This condition applies more particularly to the higher grades of flour, patents and straights; it is entirely absent in the low grade.

Chlorine attacks the coloring matter in flour and destroys some of the yellow coloring matter. In baking it is noticeable that flours treated with chlorine require less fermentation to ripen the dough, than do flours which have had no treatment.

Bread baked from flour which has been treated with chlorine shows a whiter color and a slightly better texture than that baked from flour which has had no treatment. When the treatment is applied to the lower grades of flour many times one finds a larger volume in the bread baked from the treated flour than from that baked from the untreated flour. This, however, is often caused because the untreated flours are not given sufficient fermentation period. The difference is more one of fermentation period than it is of volume.

Nitrogen Trichloride

The third system of flour bleaching, nitrogen trichloride is the reagent used. I have had very limited experience with the use of this reagent as a bleaching agent for flours, in fact I have never as yet seen the effects of this reagent as actually applied in a flour mill.

I have, however, forwarded samples of patent, straight, clear and low grade flour to the manufacturer and have investigated thoroughly the changes between the treated and untreated flours, in chemical composition, physical changes during fermentation, and I have noted the difference in the appearance of bread made from the treated and untreated flours.

The nitrogen trichloride gas treatment does not affect the chemical composition of the flour in any manner according to determinations made, which includes moisture, ash, protein, water, soluble protein, gliadin, acidity and hydrogen ion concentration, nor does it affect the colloidal condition of the proteins as shown by a series of viscosity determinations.

The viscosity determinations made on the fermenting dough, however, did show a slight but consistent decrease for the treated flour, probably enough to affect the texture. As a bleaching agent applied to flour nitrogen trichloride is very strong and it is possible to remove so much of the coloring matter in flour, that the gasoline color test will give no positive test at all.

The fermentation period of doughs made from flour treated with nitrogen trichloride is the same as that of doughs made from flour which has had no treatment.

The bread baked from the treated flour shows no increase in volume over that made from flour with no treatment; it does however, show very much whiter than that made from untreated flour; it has a better texture and a beautiful bloom.

(Extract from a paper prepared by Mr. H. E. Weaver, chief chemist of the Larabee Flour Mills Corporation, Kansas City, Mo., and read in his absence at the 1922 Annual Convention of the Association of Operative Millers.)

MILL FOR SALE

Combined Flour Mill and Elevator fully equipped with modern machinery, situated in the City of Regina, capacity of 150 barrels per day, access to all railways. Will sell on reasonable terms.

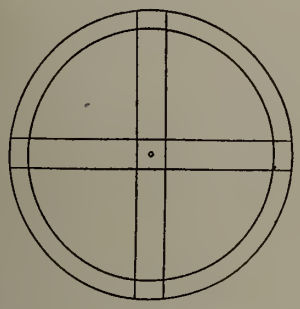
For further particulars apply

BOX 74 REGINA, SASK.

THE PRACTICAL MILLER

DEVICE FOR TRAMMING ROLLS

The accompanying sketch illustrates an idea for tramming rolls while running. The wheel is twelve inches in diameter, with a rim one inch wide with a half inch face. It must be dressed perfectly true every way. A quarter inch hole is drilled at exact



centre for a store bolt, a spool put on it, and used as a handle. Apply this wheel to the rolls while they are running. If they are out of tram it will turn around. If in perfect tram and power is steady the wheel will remain stationary.

REGULARITY OF QUALITY IN MILLING

Regularity of quality is an important feature in mill testing. More millers recognize the importance of highest possible quality, few recognize the importance of regularity, and by this is meant a flour that week after week will produce a dough of regular consistency. Improving flour one month when things are quiet, and improving the "margin" another month when things are good, play havoc with a reputation for regularity. Bakers complain when doughs are softer than usual, or if so-and-so's flour makes a stiffer dough under the same conditions. It may be taken for granted that all flours are called weak if the dough is soft, no matter if the baker has handled the flour. A good and simple plan to see if your flour varies from day to day, is to make a daily test of the granulation. Any variation in a granulation test. A "sticky" test is also useful, i.e., take measured quantities of flour, add measured quantities of water at a given temperature, dough up and see how much water can be worked in without the dough sticking to the hands. This is, of course, only a rough and ready test.

EARLY WHEAT LOW IN GLUTEN CONTENT

Winnipeg.—According to Mr. Melstead, Winnipeg manager for the Milton Hersey Company, Ltd., Paris Building, the early samples of 1922 wheat show a lower gluten average than usual. However, as the season advances, he says, the percentage of gluten appears to be gradually increasing and its quality seems to be very good.

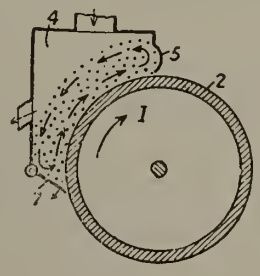
Mr. Melstead states that there is a considerable difference noted in the samples of wheat being received from various districts. On the whole he says that the crops will be of a fair average in milling value.

WHEN REPAIR WORK IS FALSE ECONOMY

In these days, when the practice of economy has become a necessity, there is possibly an incentive to repair and patch machinery that should be placed upon the scrap heap and be replaced by new and up-to-date machines. That this is a short-sighted policy, there is no doubt. Patching and repairing are a delight to some men. No matter how old, badly worn, or useless a machine may be, so long as the wood will hold a nail, or a place can be found for a bolt or a screw, it will be "fixed up" and made to serve for a longer term. It would not matter so much if there were nothing more involved than simply patching the machine or machinery and the time of the mechanic in doing the work, but as a rule there is much more at stake. If a machine breaks down on account of old age, or for that matter from any other cause, the time of the mill is lost, and its earning power stopped. The owner is, therefore, not only paying for the repairs of the machine, but is also losing what the mill would be earning if at work. Frequent stops of that kind, on account of old and worn-out machinery, add losses together very rapidly—enough in a little time to buy a new machine, and still the old ones are on hand to be again and again repaired at the expense of loss of time to the mill. The man who conducts his mill in this way is penny wise and pound foolish. As soon as a machine becomes worn out and decrepit with age, it should be discarded, and replaced by a new one. The result in the end will be money in the pocket of the miller.—Milling, Liverpool.

Milling and Grain Patents

The grain dry treating patent illustrated herewith is the invention of a Czecho-Slovakian, Mr. J. Prokop. The grain to be dry treated is husked, polished or similarly treated by an abrading cylinder 2, upon the surface of which the grain, etc., rests in a chamber, 4. The grain is carried upwards by the cylinder numbered 2, and is intercepted by the curved end 5 of the chamber 4, or by a small



roller rotating in the same direction as cylinder 2. The grain circulates as indicated by the arrows and so comes repeatedly into contact with the cylinder 2. A small abrading cylinder may also be provided within the layer of grain, etc. The machine may be worked continuously or with intermittent charges, and the bottom 7, of the chamber is hinged for the discharge of any residue.

THE PRACTICAL MILLER

CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

WANTED MILL MACHINERY.—Advertiser can use small reel, about 30" x 48", also bran duster. Reply Box 127, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE.—Dust collectors. One No. 14 Perfection and one Cyclone style No. 6. Brand new. At exceptionally low prices. Also, few second-hand grinding mills, at bargain prices. Reply, International Agency, Room 416, St. Nicholas Building, Montreal, P.Q.

POSITION WANTED by miller with over thirty years experience in mills as miller, head miller and manager. Understands the buying and selling part of the business. Can furnish proofs of ability as to obtaining yield and quality. References. Reply Box 128, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED.—Ex-miller with long experience wishes to rent 25-40 barrel mill. Reply Box 125, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—One 50-barrel Midget Marvel Mill, with Cleaner, Elevator, Heads and Boots, Belt and Buckets, Transmission. Guaranteed good condition. Reply Box 126, "Canadian Milling & Grain Journal", Phillips Place Building, Phillips Square, Montreal, P.Q.

WANTED—Position as Head Miller. Applicant has had twenty-five years' experience operating mills from 50 to 400 barrels capacity. Can furnish first class references. Reply, Advertiser, 222 Wychwood Avenue, Toronto, Ont.

MILL FOR SALE

SEVENTY-FIVE barrel roller mill, modern machinery, separate elevator capacity 20,000 bushels. Flour warehouse, 60 tons capacity. Equipped with Chopper, Corn Sheller, and Oat Crusher. Electric Power. Reply Box 121, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED immediately. Flour salesman for Eastern and Western Ontario. Will give liberal terms to right man, who must be able to secure quantity distribution with good record. Reply direct to the James Goldie Company, Ltd., Guelph, Ont.

FOR SALE — Flour mill machinery. Practical enough to fully equip small mill. All modern and in good shape. Attractive price. Reply Box 116-6, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

BRITISH IMPORTERS OF CANADIAN FLOUR AND GRAIN

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WM. GILCHRIST & COMPANY

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93 Hope Street, GLASGOW

Cable Address: "EGMONT"

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Extensive Private Telegraph Wire Connections

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LIMITED

SHIPPERS *and* DEALERS

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Grain & Commission Merchant

Dealer in all kinds of Western Canada and Ontario Grains and Mill Feeds also American Corn and Milling Wheat.

Private wires to all leading Canadian and American Markets.

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WESTERN OATS

Choice heavy white oats from best oat districts in Prairie Provinces.

Sacked or Bulk. *Wire for Prices.*

NATIONAL ELEVATOR CO., LIMITED
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MILTON HERSEY CO., LTD.
(Established Over Thirty Years)

Comparative Baking Tests

Wheat Flour and Feed Analyses. Referee Work. Consultation on Milling Chemistry Problems.

Paris Building, Winnipeg, Man.

DO YOU WANT **YOUR** NAME

to be listed in the Free Milling Directory of Canadian Flour Mills, managers, superintendents, head and second millers, and engineers.

IF YOU WANT TO BE INCLUDED

We must have your name and other particulars on accompanying form. Kindly fill in and return promptly.

Superintendent .....
Head Miller .....
Second Miller .....
Name of Firm .....
Address .....
Daily Capacity .....
Power Used .....

THE PRACTICAL MILLER

The Question Box

With a view to making this department one of real service, "Canadian Milling & Grain Journal" cordially invites its readers to send in their problems to The Question Box. There are but very few millers or elevator operators who do not have worries in the proper conduct of their plants. It may be due to lack of experience or inability to trace cause and effect. The logical and sensible thing to do is to ask someone who may possibly know. Often he is not at hand, and still oftener the perplexed miller or elevator operator does not want to show his lack of knowledge. Under these circumstances he can address his inquiry to the craft through this journal. His name will not be divulged if he wishes to remain incognito. Someone is sure to reply who has had similar problems to meet or similar questions to ask. We guarantee to devote all the space necessary to the asking and answering of questions, so do not be backward in sending them in. THE EDITOR.

QUESTION.—Why is one roll run faster than the other?

ANSWER.—If both rolls were run at the same speed, the grain would be rolled or mashed; but when one roll runs faster than the other, the grinding surface is increased and a tearing or grinding action is secured, 2½ R. P. M. of fast roll to 1 R. P. M. of slow roll is the usual practice.

NEW OFFICERS OF PAPER MILL MERGER

Mr. J. J. Warren, president and treasurer of the Harmon Paper Company, Brownville, N.Y., president and treasurer of the Warren Parchment Company, Dexter, N.Y., and vice-preseident of the St. Regis Paper Company, Watertown, Deferiet, Herrings, N.Y., is the new president of the Lincoln Mills, Limited, Merritton, Ont., manufacturers of Rope Flour Sacks, and Car Lining Paper. The chairman of the Board of Directors of the new company which represents the amalgamation of the Lincoln Paper Mills Co., Ltd., of Merritton, Ont., and the Canadian Wood Pulp Corporation with office at Little Cascapedia, Que., and timber limits in the Gaspe Peninsula and the Lybster Mills is Mr. Ferris J. Meigs of New York City. Vice-presidents are Messrs. Walter Meigs, and Ernest A. Sterling, New York City, and the treasurer is Mr. J. Gregory Smith, St. Albans, Vermont.

Under the amalgamation the pulp and paper mills at Merritton will be operated as usual, and there will be no change in the operating staff. Mr. A. S. Woodruff, the late president has after long service retired from active management while still retaining his brother's considerable interest in the concern.

Winnipeg.—Of 5,110 cars of wheat reported as handled by the Canadian Pacific Railway from the commencement of this season's crop to the present time, 3,700 cars, or roughly 72 per cent., were placed as No. 1 Northern. No. 2 accounted for 575 cars. Of wheat handled in one day recently 79 per cent. graded No. 1. Improvement in weather conditions is resulting in increased loadings.

The Duster

"I want to look at a pair of eyeglasses," said the young woman with a determined air.

"Yes, madam," said the optician.

"While visiting in the country I made a very painful blunder which I never want to repeat."

"Indeed! Mistook a stranger for an acquaintance, perhaps?"

"No, not exactly that. I mistook a bumble bee for a blackberry."

Passenger: "I say, driver, what is the average life of a locomotive?"

Driver—"Oh, about 30 years, sir."

Passenger—"I should think such a tough-looking thing would last longer than that."

Driver—"Well, perhaps it would sir, if it didn't smoke so much."

"Was that your wife I saw you with last night?"

"I should say not! That was a friend of mine."

TO-DAY'S BEST STORY

John had fourteen children, and they had all been rocked in the same cradle. One evening, as Mrs. John was rocking the fourteenth child, she said to her husband with a wan smile:

"'John, this cradle is pretty near worn out.'

"'Yep,' said John; 'it's about used up.' Then he handed Mrs. John a ten dollar bill and added, 'next time ye go to town, mother, git a new one, one that'll last.'"

After suffering a long time with toothache, a young colored girl got up her courage to go to a dentist. The moment he touched the tooth she began to scream. "Look here," he said, "you mustn't yell like that. Don't you know I'm a painless dentist?" "Well, mebbe yo' is painless, suh," she said, "but ah isn't."

Pat, who had a weakness for the wine of the country, did a day's work for the village priest, and labored so nobly that when he begged for a drink at the end of it the kind man had not the heart to refuse.

"'Tis a nail in your coffin, all the same, Pat," said he, as he poured out a couple of fingers.

"It is that, your riverence," said Pat, as he drained the glass; "but now that ye've the hammer in your hand ye might as well dhroive in another."

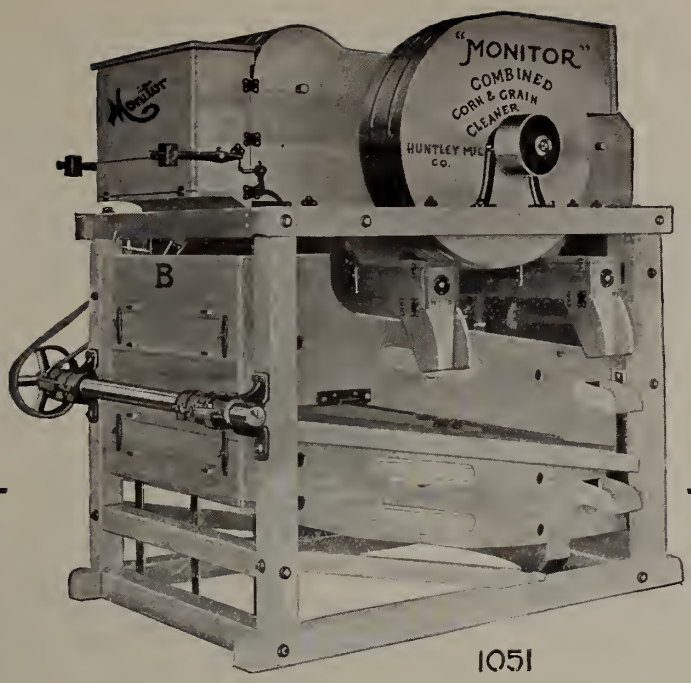
A boy and girl were discussing their motor-cars, but what a listening woman heard was this:

He—What color is your body?

She—A sort of pink shade. Rather jolly. And yours?

He—Mine's brown, with wide yellow stri——"

The woman interrupted at this point. "Really," she cried, "when people begin to discuss the color of their bodies in public, I think it is time for me to go!"



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The Missing Screens

We have all had the experience. As, for instance, you are cleaning oats but your next run is wheat; therefore, you must put in the wheat screens.

Chances are that they are not where you can find them easily or else in the hurry of handling them, they have been broken. This is real trouble when you must clean at once. It's all unnecessary. A MONITOR Combined Grain Cleaner takes care of its own screens. There are two separate and distinct sets, but they are never out of the machine. When one set is cleaning, the other set is safely stored in the machine waiting your pleasure. When you want to use them, you throw over a lever and they immediately come into use. The other set is then idle but safely in position in the machine. It's Money saved. It's convenient and efficient. To use it is to like it.

Write us.

The Monitor

REGISTERED TRADE-MARK

HUNTLEY MFG. CO.

Tillsonburg, Ontario, Canada

Represented by:— MR. WILL HILL, 404 McArthur Building, Winnipeg, Manitoba.

LAKE OF THE WOODS MILLING CO., LIMITED,

MAKERS OF

MANITOBA SPRING WHEAT FLOUR

GUARANTEED

NOT BLEACHED *NOT BLENDED*

MILLS AT KEEWATIN, PORTAGE LA PRAIRIE, MEDICINE HAT

CAPACITY 13,700 BARRELS DAILY

HEAD OFFICE, MONTREAL WESTERN OFFICE, WINNIPEG

LOCAL OFFICES:—
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CABLE ADDRESS:—"HASTINGS," MONTREAL. CODES:—A. B. C. 4th & 5th EDITIONS, 1901, RIVERSIDE

112 RECEIVING ELEVATORS IN MANITOBA, SASKATCHEWAN AND ALBERTA, CAPACITY 3,500,000 BUSHELS
TERMINAL ELEVATORS AT MILLS, CAPACITY 1,500,000 BUSHELS

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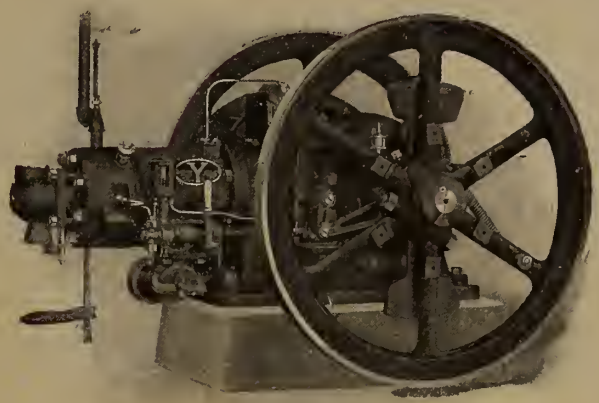
TANCREDE BIENVENU

CANADIAN
Milling & Grain
JOURNAL

VOL. III MONTREAL, OCTOBER 15th, 1922 No. 18

Fairbanks-Morse Type "Y" Oil Engines

Lower Power Costs



Every miller is anxious to operate at the lowest power cost per barrel. Water power is the only competitor of the Fairbanks-Morse Type "Y" Oil Engine.

Steam means added cost for fuel, wastage in coal partially burned, expense in removal of ashes, in engineer's and possibly fireman's time. Electric current, even at the lowest rate, must include a profit to the Central Station to take care of transmission losses and line maintenance charges.

Actual experience in mills, large and small, show that the Fairbanks-Morse Type "Y" Oil Engines are ideal power units.

Write for catalog and any special information you require.

THE CANADIAN FAIRBANKS-MORSE CO. LIMITED

CANADA'S DEPARTMENTAL HOUSE FOR MECHANICAL GOODS

84-98 St. Antoine Street, Montreal

Sales Offices in every large Canadian City

TORONTO WINNIPEG

LAKE OF THE WOODS MILLING CO., LIMITED,

MAKERS OF

MANITOBA SPRING WHEAT FLOUR

GUARANTEED

NOT BLEACHED *NOT BLENDED*

MILLS AT KEEWATIN, PORTAGE LA PRAIRIE, MEDICINE HAT

CAPACITY 13,700 BARRELS DAILY

HEAD OFFICE, MONTREAL WESTERN OFFICE, WINNIPEG

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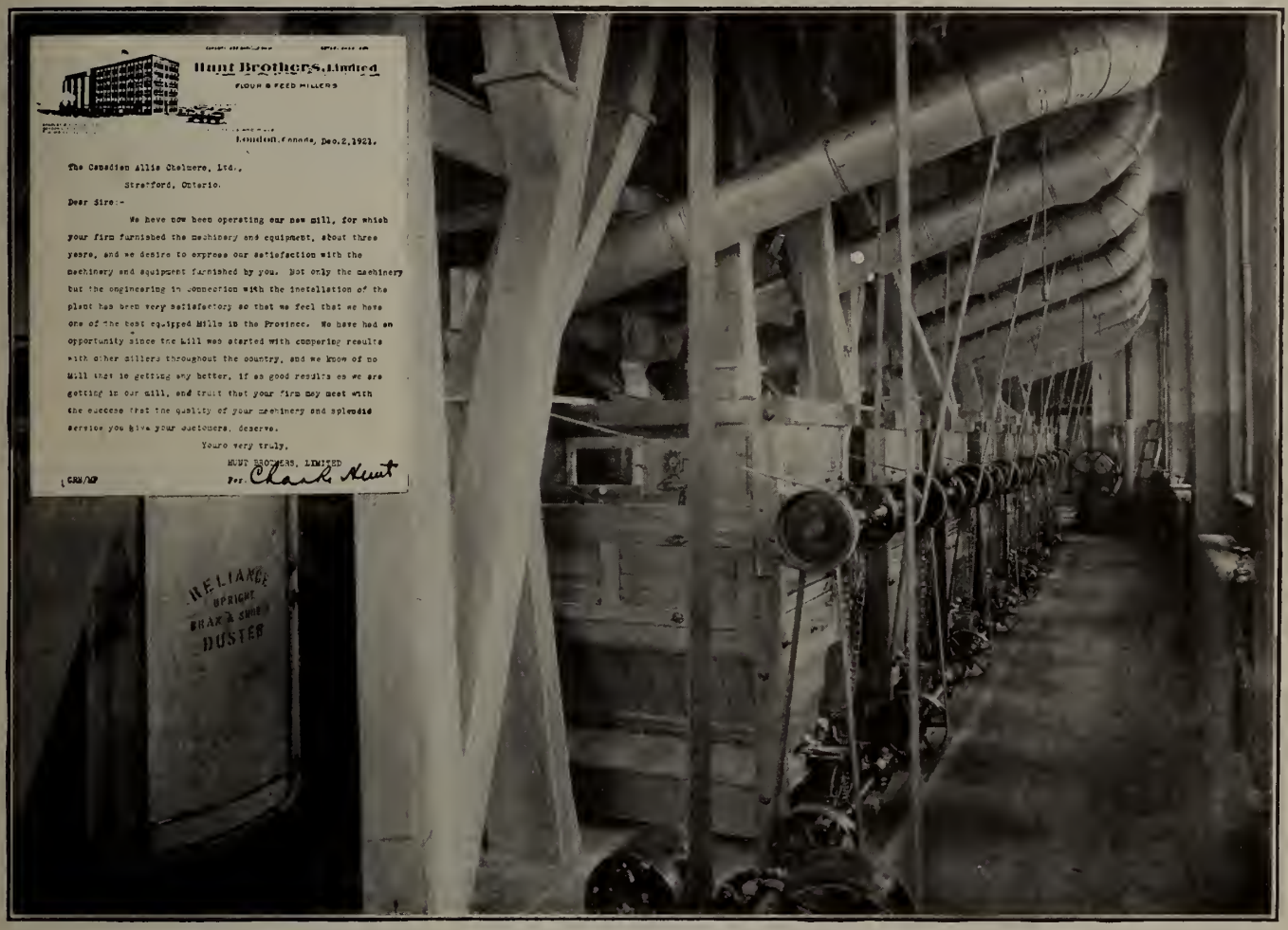
R. M. BALLANTYNE TANCREDE BIENVENU
R. W. REFORD

Read Hunt Bros.' letter regarding their Mill after three years continuous operation.


Hunt Brothers, Limited
FLOUR & FEED MILLERS
London, Canada, Dec. 2, 1921.
The Canadian Allis Chalmers, Ltd.,
Stratford, Ontario.
Dear Sirs:-
We have now been operating our new mill, for which your firm furnished the machinery and equipment, about three years, and we desire to express our satisfaction with the machinery and equipment furnished by you. Not only the machinery but the engineering in connection with the installation of the plant has been very satisfactory so that we feel that we have one of the best equipped Mills in the Province. We have had an opportunity since the Mill was started with comparing results with other millers throughout the country, and we know of no Mill that is getting any better, if as good results as we are getting in our mill, and trust that your firm may meet with the success that the quality of your machinery and splendid service you give your customers, deserve.
Yours very truly,
HUNT BROTHERS, LIMITED
Per. Chas. Hunt
RELIANCE
DUSTER

PURIFIER FLOOR IN HUNT BROS.' 1,200 BBL. MILL AT LONDON, ONT.

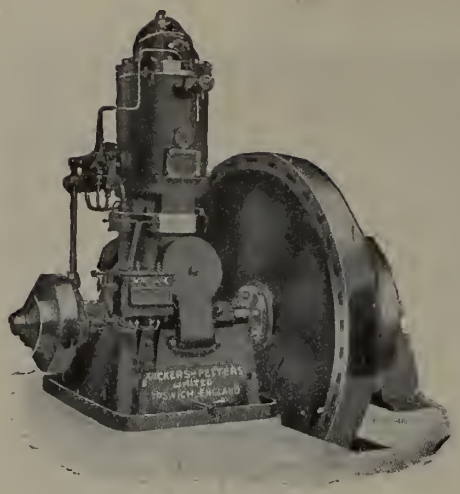
MAY WE HAVE THE PLEASURE OF INFORMING YOU OF THE SUCCESS THAT OTHER MILLERS ARE HAVING WITH OUR :: :: EQUIPMENT :: ::

CANADIAN ALLIS-CHALMERS LIMITED

STRATFORD, ONTARIO

The Strong-Scott Mfg. Co., Limited, Winnipeg, Man.

WESTERN REPRESENTATIVES



Vickers-Petter Oil Engines

(PETTERS' PATENTS.)

PETTERIZE YOUR POWER PROBLEMS

Are you getting full value
for your power bills?

GET COMPARISONS

Our engineering department will advise you willingly and free of charge

Manufactured by

VICKERS-PETTERS LIMITED
IPSWICH, ENGLAND

Canadian Representative

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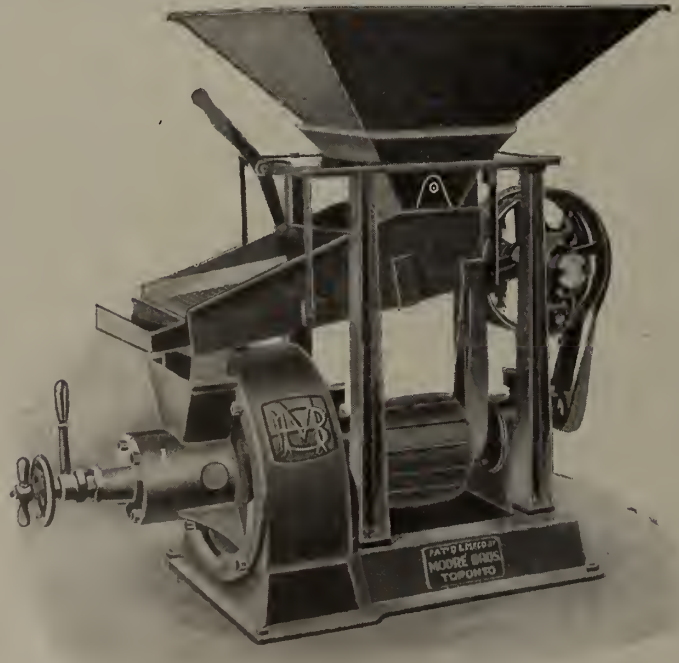
225 Beaver Hall Hill - - - - MONTREAL

For Economy Use a MOORE GRINDER

Little Power To Operate



Ball Bearing Throughout

The Running Heads of Moore Grinders cannot get out of tram. No loss of time. No loss of power.

Made in 11 inch and 15 inch

MILLERS, ELEVATOR OWNERS, CHOPPING MILLS, ETC.

Should ask for more particulars.

GRINDING, CORRUGATING & REPAIRS DONE PROMPTLY

Refitted Grinders Always in Stock.

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Manufacturing Machinists, Power, Transmission & Supplies

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John S. Metcalf Co. Limited

Grain Elevator Engineers

54 St. Francois Xavier - Montreal

CHICAGO
108 S. La Salle St.

MELBOURNE, AUST.
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BUENOS AIRES
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Lincoln Bags Last

ONLY one thing is asked of a Flour Bag; it must not spring a leak. Lincoln Bags don't! See a sample.

All Rope Flour Sacks Cream, White Coated and Blue Lined

Car Lining Paper

Samples and Prices gladly sent on request

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ROBIN HOOD MILLS LIMITED

ROBIN HOOD TRADE MARK

MILLERS OF

High Grade Western Canadian

SPRING WHEAT FLOUR

MILLS AND WESTERN OFFICES AT

MOOSE JAW, SASK.
CALGARY, ALBERTA

COMBINED DAILY CAPACITY

5,000 BARRELS FLOUR
1,500 BARRELS OATMEAL AND ROLLED OATS

HIGHEST QUALITY

ROLLED OATS AND OATMEAL

EASTERN SALES OFFICE

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RENOLD CHAIN DRIVES

for Grain Elevators Flour Mills, Etc.

Cut shows installation of 26 Renold Drives operating Conveyors and Elevators.
Installation made over 12 years ago and still giving entire satisfaction.

Write for booklet "Notes on the Selection of Chain Gear". Immediate deliveries from Canadian Stocks.

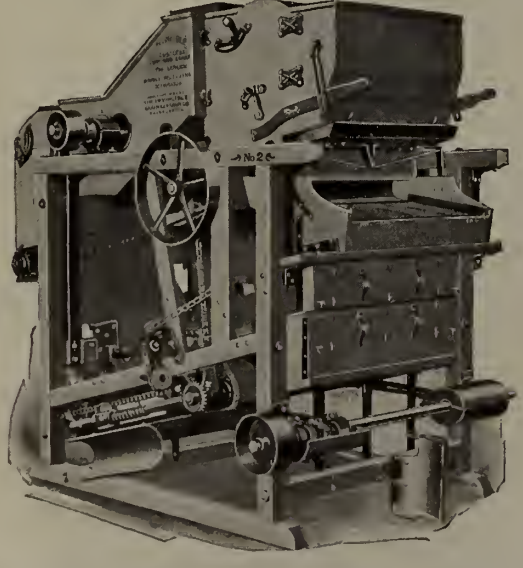
HANS RENOLD OF CANADA LTD.

MONTREAL—11 St. Sacrament St. TORONTO—32 Front St. W.

News of any Successful Machine Travels Fast

THAT'S THE REASON FOR THE INCREASING POPULARITY OF THE

INVINCIBLE TRI-SCREEN (COMPOUND SHAKE) DOUBLE RECEIVING SEPARATOR



With proper screen equipment, this machine removes from ninety to ninety-five per cent. of garlic. And besides, it performs all the functions of a Receiving Separator

If you have Garlic to contend with, don't delay placing your order for one of these Machines

IT WON'T TAKE YOU LONG TO UNDERSTAND WHY IT IS POPULAR

INVINCIBLE GRAIN CLEANER COMPANY

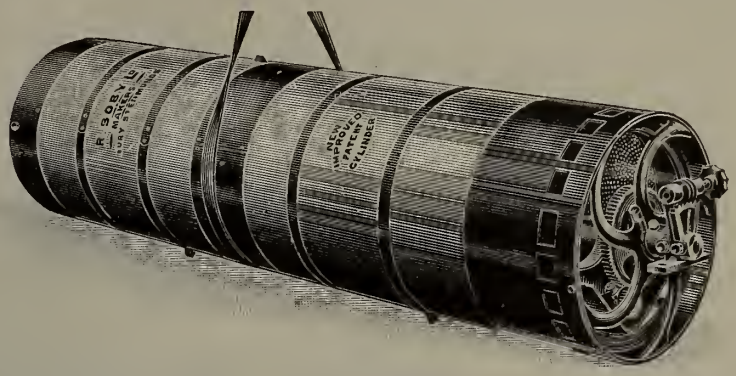
Silver Creek New York

The Harvest is in!

Have you any separating problems to solve?
Let us show you the economy of

For Separating

Oats
Wheat
Barley
Peas
Beans
Corn
etc.



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ST. ANDREW WORKS, - ENGLAND

Canadian Representative
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KIPP-KELLY LIMITED, Winnipeg, Man. - - - *Western Agents*

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Grain Trimming and Bagging

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Milling Engineers

Designers, Builders, and Furnishers of Flour, Oatmeal, Cereal and Feed Mills, Elevators, etc.

Cereal Packaging Plants a Specialty

Roll Grinding and Corrugating
Oxy Acetylene Welding
Machine Work and General Repairs

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Safety First

LESS LOSS FEWER CLAIMS
BETTER BUSINESS
WHEN DOON TWINE IS USED TO
CLOSE *Your* FLOUR SACKS *or* BAGS

FOR 60 YEARS THE STRONGEST

PROMPT SHIPMENT FROM

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FOR TIEING DOON TWINES D MADE IN CANADA *FOR SEWING*

DOON TWINES, LIMITED

KITCHENER, ONTARIO

1920 was a good year

1921 was a better year

1922

is proving a bumper year for Canada's Milling and Grain Handling Industries

Don't you want to get in line early for your share of this trade?

You will probably get some but you will certainly get more if you advertise in

CANADIAN MILLING & GRAIN JOURNAL

Rates on application.

Dubrule Bldg. - Phillips Sq.
Plat. 1983 Montreal, P.Q.

Established 1854 Cable Address: HUNTMILL

Capacity 1200 barrels daily

HUNT BROTHERS

LIMITED

Head Office and Mills

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MILLERS OF

Manitoba Spring Wheat Flour

Ontario Winter Wheat Flour

Hunt's Flour "Becomes a Habit"

The Bauer

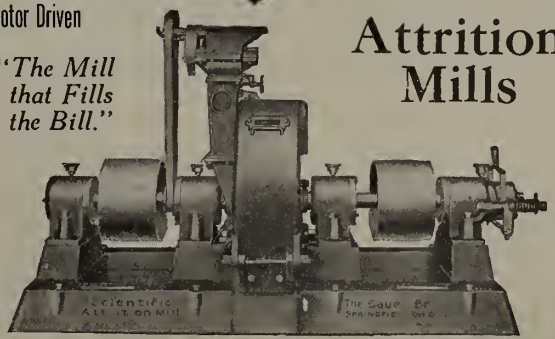
COSTS LESS PER HOUR

Belt and Motor Driven

Ball-Bearing Heavy Duty

Attrition Mills

"The Mill that Fills the Bill."



The Bauer Ball-Bearing Belt-Driven Attrition Mill

There is no good reason for experimenting with Grinding Machinery or grinding methods. Neither method results in profits. Are you sure that you are making ALL the profit possible? Why not put the problem up to the Bauer Engineering Department? This service is FREE to ALL millers. Take advantage of it.

Send for Catalog.

THE BAUER BROS. CO.

544 Bauer Bldg., Springfield, Ohio, U.S.A.

Makers of Bauer Attrition Mills, Corn Crackers, Cake Breakers Centrifugal Reels, etc.

Western Canada Flour Mills Company

LIMITED

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CABLE ADDRESS:—"LAKHURON"

MILLERS OF SELECTED HARD SPRING WHEAT FLOURS

Brands:—"PURITY" "THREE STARS" "BATTLE" "MAITLAND"

WINNIPEG MILL

Daily capacity 10,000 bbls. Flour.
" " 1,000 bbls. Rolled Oats.

100 Interior Elevators Throughout Canada's Famous Wheat Belt

The Reason Why!

Morse Silent Chain Drives

Operate in practically all Grain Elevators and Flour Mills in Canada is because of their Frictionless Rocker Joints. Oil Baths not necessary.

Immediate deliveries.

Write for Catalogue.

Jones & Glassco, *Reg.*

St. Nicholas Bldg.
MONTREAL
Bk. of Hamilton Bl'g.
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JUTE AND COTTON BAGS, HESSIANS BURLAPS, BUCKRAMS, PADDINGS, TWINES, ETC.

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BY SPECIAL APPOINTMENT
TO HIS MAJESTY THE KING

THE OGILVIE FLOUR MILLS CO.

LIMITED

HEAD OFFICE: MONTREAL, CANADA

THE Company which has made Canadian Flour renowned throughout the world with its most famous brands:—

ROYAL HOUSEHOLD

and

GLENORA

which are everywhere acknowledged to be

CANADA'S BEST

— MADE BY —

The Largest Millers In The British Empire

FORT WILLIAM MILLS

Mills at : MONTREAL, FORT WILLIAM, WINNIPEG, MEDICINE HAT

Daily Capacity, 22,250 Barrels

The St. Lawrence Flour Mills Co.

LIMITED

CANADA'S MOST MODERN AND BEST EQUIPPED MILLS
MAKERS OF CANADA'S MOST POPULAR BRANDS OF FLOUR

Regal

A high quality bread flour sold in bags of 7, 14, 24, 49 and 98 lbs. and in barrels of 98 and 196 lbs.

Quotations on car lots requested.

Fleur de Lis

A high grade bread flour sold in 98 lbs. bags and in 98 and 196 lbs. barrels.

The baker's favorite from Coast to Coast.

Offices & Warehouses: 1110 NOTRE DAME STREET WEST, MONTREAL, CANADA

25 H.P. Link-Belt Silent Chain Drive Operating Cleaner Legs

EFFICIENT POWER TRANSMISSION

Link-Belt Silent Chain is the popular means of transmitting power in modern grain elevators and flour mills today. Leather belts require long centers, and tight contacts with pulleys resulting in journal friction and dangerous sparking. Gear drives require fixed short centers, and cannot be run at the high speeds often necessary for grain elevator and flour-mill machinery. With Link-Belt Silent Chain you can use the centers that are most desirable in your plant, and transmit the power without slip or loss.

Let our engineers show you how Link-Belt Silent Chain drives can increase the efficiency of your plant. Write for our Grain Handling Plant Drive Book No. 309.

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DOES YOUR FLOUR

Command the Best Prices?

If all of your flour is not of the highest grade you know what the trouble is liable to be—high ash content—poor color.

These two objections can be removed at once, by removing the cause—oats, barley and obnoxious weed seeds from your wheat.

This important work is being done with complete satisfaction by the CARTER DISC SEPARATOR.

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"The Carter Disc Separator has enabled us to clean our wheat better and remove every bit of foreign matter in the wheat, even to the smallest pin oat. We get a better color of flour, as nothing but absolutely clean wheat gets to our rolls. We would not be without the Carter for twice what it costs."

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Put in a Carter and make more and better flour. May we send you full information?

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When you order a Carter Disc Separator you do not have to keep it unless you are thoroughly satisfied with its performance in every way. You can't lose. Write, stating your mill's capacity in bushels per hour and we will make trustworthy recommendations.

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"Everything For Every Mill and Elevator"

WINNIPEG, MAN.

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TORONTO, CANADA

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JOURNAL

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CANADA'S ONLY MILLING AND GRAIN PAPER

An Important New Department

ON page 29 of this issue of "Canadian Milling & Grain Journal" will be found an announcement inaugurating a Department of Cereal Chemistry. Questions submitted to this department will be answered by a recognized authority.

In establishing the new Department of Cereal Chemistry the publishers of "Canadian Milling & Grain Journal" have been actuated solely by a desire to assist the Canadian milling industry to a deeper understanding and wider knowledge of better milling methods.

Growing competition, both in the domestic and foreign fields, demand on the part of every ambitious miller the best he can give. Comparatively little is known regarding the chemical aspects of milling, but very few of the largest mills being in a position to maintain expensive laboratories for research work.

Canadian millers, therefore, large and small, are cordially invited to make full and free use of their journal's new department. By doing so they will advance the interests of one of their country's greatest industries and one with which they are justly proud to be associated.

The New Railway Board

WHILE the country will feel relieved that a practical railway man, in the person of Sir Henry Thornton, general manager of the Great Eastern Railway Company of England, has been chosen to head the board which, it is hoped, will succeed in nursing the National Railway System back to health, it seems a pity that a Canadian could not have been chosen for the position.

Canada is a railway country, that is, it is a country in which railroading has been, and is being done on a large scale, and in the many years during which seemingly insurmountable difficulties have been met and conquered, in the development of the nation's principal transportation system, principally the Canadian Pacific, the Transcontinental, and the Grand Trunk lines, there has been revealed railroading ability of the highest order. Many of those possessed of this ability to-day occupy highly important positions in Canadian and American companies but simply because some of those names which were submitted to the Cabinet at Ottawa did not meet with unanimous endorsement, the future of the National Railways, for three years at least, has been confided to an outsider.

A glance at the names comprising the personnel of the new board should remove any possibility of doubt that the National lines will be subject to political influence. This is good. The inclusion of Mr. James Stewart, chairman of the former Canadian Wheat Board, and now president of the Maple Leaf Milling Company, Ltd., and whose record is one of success in the commercial life of the Dominion, as well as that of Mr. E. R. Decary of Montreal, who, as chairman of the administrative commission, did much to place the finances and government of the city of Montreal on a business-like basis, is to be highly commended and their presence, with other leading Canadians on the new board, will create confidence.

Putting a Penalty on Enterprise

IN their frantic tax-raising efforts to catch up with steadily increasing deficits it seems strange that the responsibile authorities, instead of anticipating the future development of the country are penalizing those through whom this development should normally be accomplished.

Canada's loss in man-power during the war was greater in proportion to population than that of any of the other countries comprising the American continent. Hundreds of thousands of young men who came back alive lost, through their war service, years of business training that they would otherwise have had. Among those who did come back are men destined to be the future producers of the country's wealth, but what has been done with new taxation, and still more taxation, under consideration to encourage them to develop their business ability and initiative?

Surveying taxation generally, the income tax as a specific illustration is sufficient to discourage rather than encourage the development of Canada's young men, not only because of the percentage of their own incomes which are assessed, but also because of the fact that a high income tax bars from use capital which would otherwise have been available for the development of enterprises in which the owner might be engaged.

The duplication of taxation on well-established companies, doing an interprovincial trade, and who are making heroic efforts to get business back to normal, is another striking example of the penalizing of initiative. The same much to be condemned practice of duplicate taxation also applies to individuals.

The Federal Government should inaugurate a regime of the strictest economy as well as set about a modification of its taxes and at the same time enter into conference with the various provincial authorities towards removing the evils of duplicate taxation. The revenue lost by any cutting down of taxes now will be more than balanced later on when encouraged individual and corporate enterprise are forging ahead and producing results that are impossible of achievement under present onerous taxation conditions.

Technical Training in Milling

APART from their being a valuable source from which to secure efficient help, many arguments might be advanced in support of the need for the establishment in the technical institutions of the country of classes devoted to the practical study of milling.

In the first place, the successful miller of the future when competition will be even keener than it is to-day, will not only of necessity have to be a man capable of producing the best results in the manufacture of his flour but he will besides have to be a baker, a chemist, and a wheat expert.

The miller of the future, more especially the small miller, will sell to his trade not only his flour but his knowledge of flours and his ability to adapt that knowledge to a particular baker's need. He must be in a position to know either Hard or Soft wheat used alone will give the blend that this or that baker may desire, and he must also be able to determine if the different grades of wheat flour used separately do not give the required results just what blending must be done.

There could be no better place to impart to millers of the future the training they will require as the foundation for the practice of their profession than properly conducted technical classes. The young man who starts from the bottom and who steadily works his way up in a mill will in all likelihood become a good miller, but in attending to the hundred and one details of the routine work with which he must become acquainted, it would be useless to expect him to acquire that thorough knowledge of the whys and wherefores of milling that a course of technical instruction would give him.

Furthermore, in an ordinary flour mill there is not the scope nor the inclination to allow all and sundry to try out those fancies or ideas from which improvements in milling are evolved. The subject of technical education for prospective millers is one well worthy of practical consideration by the Canadian National Millers' Association.

Records kept for a number of years by several insurance companies conclusively prove that copper cable rods properly installed are practically 100 per cent. protection against damage by lightning. The approximate cost of rodding a grain elevator is $50.00 to $70.00, according to the size and height. Why take a chance of losing your elevator when a temporary investment of a few dollars will provide sure protection against such loss!

Other Points of View

POPULATION AND REVENUE

Adelaide (N.S.W.) Chronicle: While vast liabilities have been in course of accumulation the State has added only a few score thousands to its population during the last decade, and all that the Government are doing in the way of immigration is summed up in the small scheme of importing lads for apprenticeship to farmers. State finance will have to be grappled with in a more serious spirit, and with a keener recognition of the fact that the slow advance of population and the unsatisfactory rate at which our primary producing interests are being developed do not justify the big scale of our borrowing and spending Budgets.

COMPULSORY VOTING

Montreal Star: The real objection to compulsory voting is not the threat of passive resistance. That in time would disappear. It is rather found in the conviction that the votes of men and women who do not take enough interest in public affairs to go to the polls are of little value to the country when registered under compulsion. The ballots of a limited number of electors who have given some thought to public issues will be of more service to the state than several times their number of carelessly given votes.

SPORT AND MORALS

Cincinnati Enquirer: Every one is aware how seldom the laws of the athletic field are violated. No boy will risk the disapproval of his fellows, which swiftly follows the infraction of the traditional rules of combat. Hence boys in athletics practice honesty, the square deal, because they are worth while, because they are right.

PRACTICAL EDUCATION

Chicago Evening Post: Vocational training in the grammar schools is worthy of serious consideration, for it is a well-known fact that the majority of those finishing the grammar grades do not enter the high school, but must go to work as soon as they are able to qualify under the child labor laws.

SETTING A GOOD EXAMPLE

American Miller: Canada raises more wheat per capita than any other country and sets the world a good example for they also eat more wheat per capita than any other country.

HOW LOYAL WE ARE!

Barrie Examiner, Ont: Has anyone figured out how much advantage the United States has over Canada in the matter of postage rates? Canada pays four cents for the same business letter to Great Britain that costs the United States but two cents.

BACKED THE WRONG HORSE

London Daily Express: England backed the wrong horse in the Anatolian war. Let the fact be admitted. The Turks should have their capital back, and if we agree to this at the Venice conference we shall find possible a general Near East agreement with our French allies.

Eastern Provinces
MONTREAL
Dubrule Building
Phillips Square Tel. Plateau 1983

MONTREAL OCTOBER 15TH 1922

THE MONTREAL MARKETS

Flour.—There continues to be a good enquiry from the United Kingdom and continental buyers for Canadian spring wheat flour for both October and November shipment. A recent wire from New York stated that a large business in flour has been under way of late, and it was estimated that upwards of 250,000 barrels were sold to the United Kingdom and the continent, which consisted largely of Canadian grades, but a fair trade was also done in American sorts, winter storage.

There has been no further change of note in the condition of the local market, prices for spring wheat grades being about steady at a decline of 30 cents per barrel, from last report. The demand for supplies from local and country buyers has been good, and a fairly active business has been done with sales of car lots of first patents at $6.50; second patents at $6, and strong bakers at $5.80 per barrel, in jute bags, ex-track, less 10c per barrel, for spot cash.

The market for winter wheat flour has been firm owing to the continued small supplies available on spot, and the light shipments being made by Ontario millers. Sales of broken lots of choice grades are being made at $5.20 to $5.30 per barrel, in second-hand jute bags, and winter wheat patents at $5.50 to $5.60 per barrel, in new cotton bags, ex-store, with car lots of choice grades quoted at $5 per barrel, in second-hand jute bags, ex-track. White corn flour is steady at $4.40 to $4.50 per barrel, in jute bags, delivered to the trade.

Millfeed.—The most recent feature of the millfeed trade has been the continued good enquiry from buyers in the United States for Manitoba bran and further sales have been made, but the volume of business has been checked to some extent owing to the difficulty in securing foreign cars to make shipments. The demand from local country buyers for supplies has also been steady, and the market on the whole has been fairly active with sales of car lots of bran at $20, shorts at $22, and moullie at $27 per ton, including bags, ex-track. A fair trade is being done in rolled oats at $2.90 to $3 per bag of 90 lbs.

Grain.—The foreign demand for grain has been quieter, but the tone of cable advices on wheat in nearby positions has been stronger; and the few firm bids received for No. 1 northern were 3d. per quarter higher, which resulted in sales of a few odd loads being made, and some Canadian western No. 4 barley has also been sold for the first half November shipment. There has been a fair demand from New York exporters for No. 1 northern wheat on spot, for which they were bidding 30c per bushel over the October option, f.o.b., Montreal, with sellers asking 32c over.

VOLUME OF MONTREAL'S GRAIN TRAFFIC IS ACCENTUATED BY CONGESTION AT BUFFALO

New York.—The Wall Street Journal recently published a dispatch from Buffalo reporting that diversion of export grain there through Canada is being forced by the inability of railroads to handle this year's crop by the normal route, through the great lakes to Buffalo, and then to seaboard by barge or rail.

About 700 cars a day are normally used in this movement at this season. In the week beginning September 25, railroads were able to place only 150 to 200 cars at elevators each day, with the result that elevators at Buffalo are about filled. The lake fleet is being delayed in unloading but elevators have been able to handle between 1,000,000 and 1,500,000 bushels a day.

Here matters are somewhat better, as the floating elevators of Montreal permit grain to be taken aboard ocean vessels without being handled by the terminal elevators.

As regards the Canadian bay ports the situation is not quite as acute, but nearly so. There is shortage of railway cars to carry grain away from the Georgian Bay, which delays the unloading of the grain carriers.

In view of the prospect of the car shortage being continued into the winter, charters are already being made for boats for winter storage at the high figure of seven cents.

MONTREAL PORT RULES CHANGED TO SPEED UP GRAIN HANDLING

Montreal.—In order to facilitate the quick loading and despatch of grain ships in Montreal harbor, the following regulation was adopted at a recent meeting of the Grain Clearance Board and grain and shipping interests, and subsequently confirmed by the Harbor Commissioners of Montreal:

"Vessels taking full cargoes of grain will be berthed and loaded in the order in which certificates of readiness to load are issued by the Port Warden, provided their grain cargo is in the elevators or can be arranged for through the Grain Clearance Board, and loading will be continued until completed. Vessels shall lose their turn when their grain cargoes are not here or cannot be provided for, but shall remain on turn in their order of readiness. Similarly, vessels ready, but wishing to defer their loading, shall retain their position on turn."

Mr. M. P. Fennell, chairman of the Grain Clearance Board, and general manager of the port, in commenting on the new regulation, said that on account of the eagerness of large grain shippers to move their grain through Montreal this fall, by reason of the inability of American railroads to haul it from Buffalo to Atlantic ports, the port of Montreal would probably handle more grain during the months of October and November than in any similar period of its history. Mr. Fennell said that already many more vessels have entered and cleared from the port of Montreal in 1922 than in any previous year and that a total of 105,000,000 bushels of grain has been handled in the port since the opening of navigation this spring.

ASK SUSPENSION OF REGULATION TO FACILITATE GRAIN HANDLING

Montreal.—A special meeting of the Montreal Corn Exchange Association was held recently to consider ways and means of facilitating as far as possible the shipment of grain from Fort William and Port Arthur to the lower lake ports, in order to assist the railways in avoiding congestion.

To this end it was decided to memorialize Hon. James Robb, Minister of Trade and Commerce, to use his efforts with the Government to have an Order-in-Council passed lifting for the latter part of the season the regulation which demands that Canada States vessels loading from Canadian ports cannot proceed directly to other Canadian ports to unload, but must first touch at some American port.

This regulation, it was pointed out, had been adopted first in 1917. At that time the American Government, in order to harass Canadian coastal shipping between U. S. ports had passed an ordinance that Canadian vessels could not take on cargo at one American port and unload at another without first touching at a Canadian port. The Canadian regulation was passed then by Order-in-Council as a species of retaliation for this.

It was stated by the grain men that the regulation at the present time was of little use to Canadian grain interests, and that especially during the end of the season rush it actually interfered with the prompt shipment of Canadian grain to the seaboard.

It was therefore decided to instruct the secretary, Mr. H. C. Beatty, to memorialize the Minister of Trade and Commerce in this regard.

PUBLIC TERMINAL GRAIN ELEVATOR COMPANIES AND OVERAGE CHARGES

Montreal.—Recent advices received from Fort William indicate that public terminal grain elevator companies at the head of the lakes will not pay overage charges to the Board of Grain Commissioners this year, according to general agreement among them. No action will be taken to collect such charges as may exist after the result of the annual weigh-up is known, until the case against the Richardson Elevator Company is determined by the Court of King's Bench in Manitoba this fall.

No accounts have yet been tendered to the terminal companies, as the statistical and inspections departments of the Board of Grain Commissioners have not yet concluded their reports following the August weigh-up. Last year and before, terminals made overage payments under protest, and the understanding was with the Grain Commission that if the charge was found illegal they would have just claims for the return of these monies. Consequently a trust account was created in which these disputed funds were placed. In the meantime the government has "taken" this fund and transferred it to consolidated revenue.

Replying to complaints, it is understood the department of trade and commerce stated that if the case went against the Board of Grain Commissioners and in favor of the public terminal companies, the cash could easily be transferred back again.

But this year the terminals are taking no chances, and it is learned here on the very best of authority that they will prefer to keep the money, wherever overages exist, rather than pay it in and risk litigation to get it back again. The commissioners are more or less tolerant of this attitude, arguing that as the terminals are all responsible corporations, they will be amenable to just claims if the Court of King's Bench rules against Richardson this fall.

QUOTATIONS ON BRAN AND SHORTS

The following nominal quotations on bran and shorts have been reported by the Canadian National Millers' Association, Coristine Building, Montreal, to the United States Customs Authorities as the prices of these commodities now in effect. These prices are the net cash prices in bulk, f.o.b., the mill:

	Bran	Shorts
Montreal	$17.50	$19.50
Toronto	17.50	19.50
Port Colborne	13.00	15.00
Fort William	11.00	13.00
Keewatin	12.50	14.50
Winnipeg	13.00	15.00
Moose Jaw	10.00	12.00
Calgary	10.00	11.00

U. S. GRAIN EXPORTS SHOW DECLINE

Washington.—Decreased exports of grain during August have been reported by the Commerce Department.

Exports of grain during August aggregated $67,000,000 compared with $115,000,000 in August a year ago. Exports for the eight months ended with August amounted to $341,000,000 against $575,000,000 during the corresponding months a year ago.

Wheat exports for the month were 34,000,000 bushels worth $42,000,000, compared with 59,000,000 bushels worth $81,000,000 in August, 1921. Shipments of wheat flour aggregated 1,000,000 barrels worth $7,000,000, compared with 2,000,000 barrels worth $12,000,000 in August a year ago.

Montreal grain brokers when interviewed said that this large drop in the August exports of grain was due to the fact that at August last year the stocks of old grain were considerable, while this year they were very much smaller. As the new wheat has only just started to move, this year's bumper crop does not affect the August shipments.

MILL FOR SALE

Combined Flour Mill and Elevator fully equipped with modern machinery, situated in the City of Regina, capacity of 150 barrels per day, access to all railways. Will sell on reasonable terms.

For further particulars apply

BOX 74 REGINA, SASK.

Ontario

TORONTO

TORONTO OCTOBER 15TH, 1922

THE TORONTO MARKETS

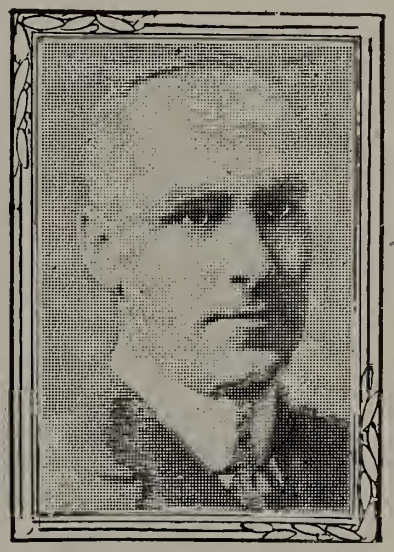
Flour.—The flour market, especially for export business, has shown considerably more firmness of late, and sales of Manitoba straights have been made as high as 36s ($8.05) to the United Kingdom. In regard to Ontario winter wheat flour a few sales have been made at 35 shillings ($7.83) for export, but in small volume, owing to the scarcity at the moment of this grade of flour. The farmers seem to be busy on their land and are not delivering wheat at all freely to Ontario mills which are, in consequence, not in a position to sell winter wheat flour in any quantity. In the domestic market there is practical no change and bakers are still buying from hand to mouth.

Millfeed.—The market for millfeeds is stiffening considerably and there is an improved demand with bran quoted at $20, and shorts at $22, Montreal freights. White middlings are quoted at $28, and feed flour at $1.70. The improvement in the millfeed situation generally is largely due to the dry weather, and the excellent demand in the United States where prices are improving steadily. It is possible, at the present time, to obtain from one to two dollars a ton on American prices and shipments across the border are heavy, although the car shortage is affecting shipments to a considerable extent. This car shortage has also affected the American prices. Up to the present dealers on this side of the line have been able to get cars for United States shippers while American cars have been held up at various American points, notably Buffalo.

Oil Cake.—There are very few domestic transactions in oil cake which is selling at $5.75, Montreal, with cotton seed meal quoted at $47.50, Hamilton, Ont., freight.

Oatmeal.—There is no business passing for export in either rolled oats or oatmeal at present as the importers in the United Kingdom are unwilling to pay a price which would enable the mills here to even get out at cost. The normal value of rolled oats for export is around 41 shilling and 6 pence ($9.15), and oatmeal at 39 shillings and 6 pence ($8.71). Mill prices to the domestic trade range from $2.90 to $3.05 in mixed car lots for rolled oats per 90-lb. bag, and oatmeal at $3.20 to $3.35 in 98-lb. bags.

Grain.—With transportation facilities anything but satisfactory, and with the market under considerable fluctuation, there is little life in the Ontario grain trade at the present time. Grain dealers state that millers are now trying to get deliveries of wheat bought some time ago rather than making further purchases. Wheat and oats are now being shipped from Fort William to the seaboard all-rail, while shipments are also being made from the Head of the Lakes to Ontario points all-rail. Cars for short haul in Ontario are extremely scarce and the situation in this respect is seriously hampering the grain trade. Deliveries of Ontario grains are extremely light and millers are unable to turn out large quantities of winter wheat flour, owing to wheat being supplied in only small quantities. It would appear, from enquiries coming from European countries, that foreign dealers are becoming somewhat anxious regarding supplies and that stocks in Europe are becoming light. Word from Fort William indicates that the blockade of the lower lake ports with grain has produced a situation there which is unique for this season of the year. Export demand, which has to be filled, has rendered it necessary for grain to be loaded on cars there and sent all-rail to eastern points, instead of being shipped by water or through Georgian Bay ports. It is stated that the Canadian National Railways have contracted for the shipment of 200,000 bushels of wheat all-rail, which is now being loaded. No. 1 Northern wheat, c.i.f. the bay ports, is being quoted on the Toronto Board of Trade at $1.08¾; American corn, No. 2 yellow is quoted at 85 cents track, Toronto, prompt shipment, and No. 3 yellow at 83 cents.



(Canadian Newspaper Service Photo.)

JAMES STEWART

President of the Maple Leaf Milling Company, Ltd., and chairman of the former Canadian Wheat Board, who has been appointed a member of the new National Railway Board.

SIX C. G. M. M. BOATS DETAILED TO ASSIST IN CARRYING GRAIN

Toronto.—Six Canadian Government Merchant Marine vessels, which have been lying idle all summer in Goderich and Midland, have been ordered into commission to handle grain from Fort William to Georgian Bay ports. Each vessel has a capacity of 100,000 bushels of grain. The crew for each boat will number twenty men.

The Wahcondah, a steel freighter, has been purchased in England by Mr. A. B. MacKay, of Hamilton, and is being brought to Canada to go into the lake-carrying trade for the balance of the season.

WARNS LAKE SHIPPING INTERESTS AGAINST RATE DISCRIMINATION

Ottawa.—At a conference here recently with representatives of the Dominion Marine Association, various other shipping concerns, and the Canadian National Railways, Hon. James Robb, Minister of Trade and Commerce, issued a warning that Canadian lake shipping interests must do all in their power to keep Canadian export grain in Canadian channels and that an approximation of the rates to Canadian bay ports with those to Buffalo must be established.

The conference was called because of complaints dating as far back as June last, to the effect that rates from Fort William to bay ports and Port Colborne ranged from a quarter of a cent per bushel on wheat to a cent and three-quarters higher than from Fort William to Buffalo, as a result of which discrimination there was a widespread demand upon the government that the Canadian coasting laws be suspended and American vessels permitted to compete between Canadian ports.

There is no excessive rate charged by transportation companies in the movement of Canadian grain from Fort William to the Georgian Bay ports, according to a prominent Montreal official of the Canada Steamship Lines, who takes exception to the statements made in connection with this matter and denies the accuracy of a rate of five cents for shipments from Fort William to Buffalo.

The possibility of the Government suspending, as requested, the port-to-port regulations is not taken seriously because it is claimed if this was done it would not help the situation any but probably prove an incentive to higher rates and be unfair. The Canada Steamships Lines, it was pointed out, had been moving grain during the season at cost, and the present rate is not too high in view of the difficulty and the cost of coal, which is an enormous factor in the running of ships.

APPOINTMENT CAUSES SATISFACTION

Toronto.—Amongst milling and grain circles in Toronto the announcement that Mr. James Stewart, president of the Maple Leaf Milling Company, Limited, had been appointed to the directorate of the Canadian National Railways, was received with great satisfaction. It is agreed that no Canadian knows more about the handling of grain and grain products than Mr. Stewart, the former head of the Wheat Board, and it is believed that he will ably represent the milling interests and the country at large in the Government's railway enterprise.

TRADE OPPORTUNITY

No. 276.—Mr. John Findlay, 51 West Street, Kingston, Jamaica, British West Indies, would like to get in touch with a Canadian flour mill, not already represented in the Kingston district, or a good commission house handling flour and oats, with a view to becoming agent for same. Canadian references furnished.

The Modern Sophocles

IF you want to be popular, cultivate the qualities which attract. It is the good-natured man or woman, the optimistic soul, who believes in the best and who sees the best in everybody, who believes that the best is coming to him, and that there is nothing the matter with anything God made. It is the sunny nature that attracts others—the cheerful disposition, the amiable personality.

The grouch doesn't attract; he repels. The sour disposition antagonizes.

The things that attract us are the things we like. We like sunshine, we like joy, gladness, beauty—the things that are helpful. We like the things which make an agreeable, pleasing impression on us—the people who are happy, kindly, tolerant, helpful.

Cheerfulness is magnetic. Sunny souls always attract us, so whatever qualities go to make up moral sunshine, a sunny disposition will increase your magnetism in proportion to your cultivation of them.

OCEAN RATES ON FLOUR SHIPMENTS

The following ocean freight rates (nominal) from New York on shipments of wheat flour, oatmeal and rolled oats in sacks per 100 pounds are effective as of the 20th October, 1922.

	Wheat flour	Oat-meal	Rolled oats	
U. K. Ports	20c	20c	32c	Canadian Funds
Hamburg	17c	17c	30c	U. S. Currency
Bremen	17c	17c	30c	
Rotterdam	17c	17c	28c	
Amsterdam	17c	17c	28c	
Antwerp	17c	17c	27½c	
Havre	20c	20c	37½c	
Bordeaux	20c	20c	37½c	
Lisbon	32c	32c	...	
Copenhagen	25c	25c	45c	
Christiania	25c	25c	35c	
Gothenburg	25c	25c	45c	
Stockholm	27c	27c	45c	
Danzig	25c	25c	45c	
Helsingfors	28c	28c	45c	
Marseilles	30c	30c	65c	
Genoa	30c	30c	65c	
Naples	30c	30c	65c	
Piraeus, Salonica, Smyrna, Constantinople, Alexandria	30c for October steamers.			

COPIES OF U. S. TARIFF

The Canadian National Millers' Association, Coristine Building, Montreal, has available for distribution copies of the text of the new United States tariff. Copies will, upon application, be forwarded free to members of the Association. A nominal charge of 25 cents will be made for copies sent to non-members of the Association.

Western Provinces

WINNIPEG

WINNIPEG OCTOBER, 15TH. 1922

THE WINNIPEG MARKETS

Flour.—Demand for flour is quite brisk and the majority of the mills, especially the larger ones, throughout Western Canada are now running to capacity. With flour prices around pre-war levels there appears to be every confidence on the part of the buying trade that lowest prices have been reached and jobbers, bakers and consumers generally are buying freely for immediate and future requirements. This activity is also being accentuated by the uncertainty regarding the war situation in Europe. The wheat market has been active and strong during the past two weeks, and this in face of extremely heavy receipts and generally bearish crop news. It is stated by Winnipeg millers that the threatened war has strengthened the demand from overseas for Canadian flour, and it is generally reported that a large business is being worked, and undoubtedly the outlook is very optimistic.

Western mills are finding a splendid market for their "clears" in the Orient and steady shipments are being made. Notwithstanding the duty imposed by the American Government, liberal supplies of flour are moving into the United States, and a despatch from San Francisco recently stated that Canadian flour was underselling Minneapolis flour in that city, and finding a growing demand. This business is perhaps made possible by the cheapness of Canadian wheat as compared with American wheat, quality considered. There has been no change in flour prices during the past two weeks, but an advance may be anticipated in the immediate future if wheat prices should make any further gains. Present quotations are: For delivery at points between Fort William and the Saskatchewan boundary, top patent springs $6.30 bbl., jute; seconds at $5.70, and first clears at $5, mixed cars, 30-day terms; cotton, 10c over this basis. Saskatchewan and Alberta points are 10c under Manitoba, and Pacific Coast points 30c to 50c over. Bakers and other car lot buyers get special prices.

Millfeed.—Pasturage throughout western Canada being excellent, the domestic demand for millfeeds is curtailed. Trade generally is very quiet. Prices remain same as a week ago. Quotations: bran $17 per ton, in mixed cars with flour, and shorts $19, in bags delivered, Winnipeg territory.

Oatmeal.—Demand for rolled oats and oatmeal is dull and listless. No changes in prices are recorded. Quotations: good brand of rolled oats $2.50, in 80-lb. cotton bags, and oatmeal $3.05, in 98-lb. cotton bags, delivered, Winnipeg territory.

Rye Flour.—This market is extremely dull, there being a poor demand for this flour. The local mill is still closed down and official prices are not obtainable. Local retail prices appear to be about unchanged from last report.

THE GRAIN MARKETS

With very little change in the general situation, the trend of wheat prices continued to be rather erratic during the first week in October, and after ending the week with the nearby future showing an advance of 2⅛c, turned weak again on the 8th under heavy hedging sales and closed showing an advance of only ½c over the previous Monday's close. Closing quotations for the October future for the week commencing Monday, October 2, were: 96⅜, 96⅜, 95⅞, 97½, 98½ and 96⅞.

Exporters have been good buyers of the futures on the war scare, and a big export business would have also been undoubtedly worked in the cash article if tonnage space had been available, but it has been extremely difficult to secure ships, or rather dockage space to load and unload ships, as elevators are filled to capacity and cannot unload the boats already there.

Tonnage rates from Fort William to Bay ports which were about 3c per bushel three weeks ago, are now 7c and 8c, and in addition the shipping trade are suffering from heavy demurrage charges. As a result considerable wheat is now being shipped all-rail route, the rates being about on a par from Fort William to Montreal.

Cables have been showing strength, and supplies of wheat in European countries are undoubtedly getting low. Bids from abroad are right in line and if transportation facilities to the Atlantic coast were available, a very large business could be worked in wheat.

JAMES STEWART'S APPOINTMENT TO NAT. RY. BOARD PLEASES GRAIN TRADE

Winnipeg.—Mr. James Stewart, president of the Maple Leaf Milling Company, Ltd., was the recipient of hearty congratulations here recently on his appointment to the directorate of the Canadian National Railway. "I do not know whether you should congratulate me or sympathize with me," he said, "but I shall do what I can."

Asked as to his personal acquaintance with the other members on the board of directors he said, "I know of them but have not met them. They all stand high in the Canadian business world. Mr. Decary, it will be remembered, achieved a remarkable success in reorganizing the finances of the City of Montreal; Sir Henry Thornton has a great reputation for energy and tenacity. He is spoken highly of in railway administrative circles."

"The grain trade views with great satisfaction the appointment of Mr. Stewart to the Directorate of the Canadian National Railways," said J. B. Craig, president of the Winnipeg Grain Exchange, commenting on the appointment which is popular with all ranks of the grain trade and allied industries. "He has wide practical knowledge of the problems of moving grain and his experience, coupled with his energy and ability, will be of great value to the whole western community. He thoroughly appreciates how closely the whole life and prosperity of the West is identified with the orderly movement to markets of its agricultural produce. We are confident of our western director."

CHARGED TERMINAL ELEVATORS WITH MIXING DRY AND MOIST WHEAT

Winnipeg. — Allegations that private elevators are mixing dry grain with grain of the same grade, but containing a high percentage of moisture, and so covering up manipulations as to defy detection by inspectors, were made at a recent session of the Board of Grain Commissioner by Mr. C. B. Watts, representative of the Dominion Millers' Association, Toronto. Mr. Watts expressed surprise when he learned that the regulations of the Grain Board, passed by Order-in-Council, permitted inspectors to grant a grade certificate after wheat had been mixed in private elevators.

Mr. C. A. Godfrey, Canadian Elevator Company, pointed out to Mr. Watts that any mill could get wheat unmixed direct from the producer by all-rail route at any time. His company had just completed shipment of 80 cars to one Eastern company. It might be the small millers were desirous of getting wheat cheaper if the competition of the mixing houses were eliminated, Mr. Godfrey suggested, but Mr. Watts protested such was not the case.

Amendments Sought by Hon. Mr. Langley

It developed at the sitting that Hon. George Langley, whose allegations of irregularities against the terminal grain elevators led to the hearing before the Board of Grain Commissioners, did not want rules and regulations referring to sample markets, mixing of grain and private elevators rescinded. Mr. Langley admitted he only wanted amendments whereby private elevators could only mix grain purchased on sample. The chief point made by Mr. Langley was that farmers did not benefit in any way by the mixing of grain by private elevators, and he charged that grain men were resisting his application merely to protect their "breeches pockets," whereupon W. H. McWilliams, representing the private elevator companies retorted that Mr. Langley, by his attitude, was seeking to rehabilitate himself in the political life of Saskatchewan.

Case for Millers

Mr. F. C. Cornell, secretary of the Canadian National Millers' Association, Montreal, said his company practically represented all the big mills. They had buyers out who bought on sample, and if there were a sample market at Fort William they would continue to do the same. Speaking for the millers, he wanted to say that if a sample market were going to be of real benefit to the producers of wheat, the millers wanted to see it set going. They bought on sample now, but it was not correct to state, as was sometimes done, that they took the cream off the wheat, for the crop moved too fast for that.

HUGE GRAIN BUSINESS HANDLED BY LAKE SHIPPERS' CLEARANCE ASSN.

Winnipeg.—Two hundred and seventy million bushels of grain was handled by the Lake Shippers' Clearance Association by vessel and rail during 1921, it was stated recently by Mr. Capel Tilt, president of the association, at the annual meeting here. This was 73,000,000 bushels more than was handled in 1920, 142 million more than 1919 and nearly 200,000,000 more than 1909, the first year of the association's operations.

The total of 270,000,000 bushels shipped by the association from Fort William and Port Arthur was over double the quantity loaded from Chicago, treble the amount loaded out of Duluth in the same period and approximately 70,000,000 bushels in excess of Chicago, Duluth and Superior combined, Mr. Tilt said.

Mr. Tilt reported that the association was in sound financial condition, the reserve being $378,000 or an average reserve of $6,000 against each membership.

The following officers were elected: President, Mr. Capel Tilt; Vice-President, Mr. Harry Swartz; Secretary, Mr. Sid. T. Smith; Treasurer, Mr. Alvin K. Godfrey; Directors, Messrs. C. C. Field, F. J. Anderson and R. M. Wolvin.

RESTRICTION STORY IS DENIED

Winnipeg.—Denial has been made by Mr. Charles Murphy, general manager western lines, Canadian Pacific Railway, that his company, as reported recently from Regina, had ordered a temporary restriction on 1,000 cars of grain a day from the prairie provinces. All grain offering, Mr. Murphy declared, was being handled in a most satisfactory manner, and there was absolutely no congestion at terminals.

THE WESTERN MARKETS

The following report furnished by Messrs. Baird and Botterell, 103 Grain Exchange, Winnipeg, shows daily highest price levels from Sept. 26, 1922, to Oct. 11, 1922, inclusive.

	Sept. 26	Sept. 27	Sept. 28	Sept. 29	Sept. 30	Oct. 2	Oct. 3	Oct. 4	Oct. 5	Oct. 6	Oct. 7	Oct. 9	Oct. 10	Oct. 11
October Wheat....	0.98¼	0.98½	0.97½	0.97⅜	0.98¼	0.98	0.96¾	0.97	0.97½	0.98	0.98⅝	0.98	0.97⅜	0.98¾
November Wheat..	0.98¾	0.98¾	0.98⅜	0.97⅝	0.98⅝	0.97⅛	0.97⅛	0.97⅛	0.98¼	0.98½	0.98¾	0.98½	0.97¾	0.99
December Wheat..	0.95⅜	0.95¾	0.95½	0.95½	0.96½	0.95	0.95¼	0.95½	0.96¼	0.96½	0.97	0.96⅜	0.96¼	0.97⅛
May Wheat.....	1.01	1.01	1.01¼	1.00½	1.01⅝	1.00¼	1.00⅛	1.00⅝	1.01	1.01½	1.07½	1.01¼	1.00½	1.01½
October Flax.....	2.01½	2.01½	1.97½	1.98¾	2.00½	1.97¾	1.97	1.97½	1.98	2.00	1.97¾	1.97	1.97¾	1.99½
November Flax....	1.81½	1.90⅛	1.79	1.88¾	1.85	1.88	1.89½	1.86½	1.87	1.89⅛	1.91½	1.91¾	1.90	1.93¼
May Flax.....	1.86	1.87	1.84¾	1.86	1.86	1.87¼	1.87¾	1.89½	1.91½	1.94½	1.91	1.90	1.89	1.91½
October Rye.....	0.67⅞	0.67⅞	0.67¼	0.67¼	0.67⅛	0.67	0.66½	0.66⅞	0.67⅜	0.67½	0.67¾	0.67⅝	0.67¼	0.68⅛
October Barley....	0.53⅜	0.53⅜	0.52⅞	0.52⅝	0.52⅜	0.52¼	0.52⅝	0.52¾	0.52	0.53¼	0.52⅝	0.52¼	0.52¼	0.53
December Barley..	0.50	0.50⅜	0.50⅝	0.50	0.50	0.49⅝	0.50⅛	0.50⅛	0.50⅝	0.50⅝	0.50⅞	0.51¼	0.51½	0.51⅞
October Oats.....	0.42	0.42	0.41½	0.41¼	0.41½	0.41⅛	0.41¼	0.41⅜	0.41½	0.41¾	0.42	0.41⅞	0.41⅛	0.41⅞
December Oats....	0.39¼	0.39¼	0.39⅛	0.38⅞	0.39⅛	0.38⅜	0.38⅝	0.38½	0.38⅝	0.38⅝	0.38⅝	0.38½	0.39⅛	0.38⅝
May Oats.....	0.42½	0.42½	0.42¼	0.42⅛	0.42⅜	0.42	0.41⅞	0.41¾	0.41⅞	0.41⅞	0.42⅛	0.41¼	0.41⅝	0.42

Foreign Flour and Grain News

A FURTHER cut of 30 cents per barrel in spring wheat flour prices since our last general report of the milling situation has greatly stimulated buying activity, both in the domestic and foreign markets. Jobbers, bakers and consumers, who when fiirst and second patents were selling at $6.80 and $6.30 respectively, felt that bottom prices had been reached and began to buy freely are now, from all accounts, stocking up in earnest, and a continuation of the present highly satisfactory volume of business may be expected.

With special reference to foreign trade western millers report that the recent period of war rumors greatly strengthened the demand from overseas for Canadian flour. This is confirmed by recent reports from New York, stating that of 250,000 barrels sold to the United Kingdom the bulk was composed of Canadian grades. The satisfactory nature of the export trade is further accentuated by reports from the United States Pacific coast which state that in spite of the tremendously heavy duty now being imposed by the United States on Canadian flour imports that the Canadian product is underselling Minneapolis flour in San Francisco and other cities. The reason for this may be assigned to the relative cheapness of Canadian wheat compared with the prices prevailing for the United States product.

The grain markets have been steady of late, settlement of the Near Eastern problem having checked the recent series of violent fluctuations which did not, however, lead to any revision of flour prices which are to-day at, if not actually below, their pre-war level.

RUSSIA.—Latest advices confirm the moderate production of grain in Russia this year, the cereal outturn being about 25 per cent. below the pre-war production owing mainly to the decreased acreage. However, the Russian Government seem rather inclined to permit a limited export trade and are expected to give a definite decision within the next few days. It is reported that exports will probably be limited to 800,000 tons, which will include all descriptions of seed, grain and oilcakes.

ROUMANIA.—The high export duties on grain are still the subject of general complaint, and it is hoped that the Government will shortly effect a reduction. No improvement has been reported in the maize crop, and an outturn very little in excess of last year's is all that can be hoped for. Owing to the protracted drought, the cobs have ripened before maturity and insect damage is certainly not inconsiderable.

JUGO-SLAVIA.—Harvesting of maize is now general. The late planted fields have benefited slightly by the cool, rainy weather recently experienced.

GREAT BRITAIN.—There is more animation in the flour trade, and the general trend of opinion is that from now on there is likely to be less depression than in the past few months. Home mills seem to be better equipped with orders than they apparently were a month or two ago, but there is still plenty of room for improvement, and although things are looking better, it cannot be said that the market for flour is by any means normal.—Modern Miller.

HUNGARY STOPS GRAIN EXPORTS

Budapest.—The exportation of grain has been prohibited by the Hungarian government as the crop outlook shows no surplus. The measure, it is believed, will further aggravate the food situation in Austria.

NEW 3,000-BBL. MILL FOR JAPAN

Minneapolis.—H. Tanaka, representing the Nippon Flour Mill Co., announced recently, during a visit to Minneapolis, his company's plans for the erection of a 3,000-bbl. mill in Tokyo. Contracts for the machinery have been let to the Nordyke and Marmon Co., Indianapolis, Ind.

The Nippon Flour Mill Co. now operates nine mills, principally in or near Tokyo and Kobe, the total capacity of which is 7,000 bbls. per day. It is therefore the largest company in Japan.

THE CHICAGO MARKETS

The following table compiled from figures furnished by Messrs. Logan & Bryan, members of the Winnipeg Grain Exchange and the Chicago Board of Trade, C.P.R. Telegraph Chambers, Montreal, show highest price levels recorded on Chicago Board of Trade from Sept. 26, 1922, to Oct. 11, 1922, inclusive.

	Sept. 26	Sept. 27	Sept. 28	Sept. 29	Sept. 30	Oct. 2	Oct. 3	Oct. 4	Oct. 5	Oct. 6	Oct. 7	Oct. 9	Oct. 10	Oct. 11
December Wheat..	1.10	1.10	1.11	1.11	1.11	....	....	....	....	....	....	....	....	....
December Wheat..	1.06⅜	1.06⅝	1.06¼	1.05⅞	1.06¼	1.04⅞	1.06⅛	1.06⅞	1.07¼	1.08	1.07¾	1.08¼	1.07⅞	1.09⅜
May Wheat.....	1.09⅝	1.09⅝	1.09½	1.09	1.09⅝	1.08	1.08¾	1.08⅞	1.08⅞	1.09¼	1.09¼	1.09½	1.09¼	1.09⅜
September Corn...	0.65	0.65	0.64½	0.64⅜	0.63⅞	....	....	....	....	....	....	....	....	....
December Corn...	0.60⅛	0.60½	0.59⅞	0.59¾	0.59⅜	0.60⅛	0.61⅛	0.61⅜	0.61¾	0.61⅝	0.62¼	0.62½	0.62¼	0.63⅜
May Corn.....	0.62¾	0.62¾	0.62⅜	0.62⅛	0.62	0.62¼	0.52¾	0.62⅞	0.63¾	0.63⅛	0.63⅞	0.64⅜	0.64⅛	0.65¼
September Oats...	0.42	0.42	0.41⅞	0.41½	0.41½	....	....	....	....	....	....	....	....	....
December Oats....	0.37⅞	0.37¾	0.37⅝	0.37⅝	0.37½	0.37¾	0.39	0.39⅛	0.39	0.38⅝	0.39	0.39	0.39	0.39⅝
May Oats.....	0.39½	0.39½	0.38⅞	0.39	0.39	0.39	0.39½	0.39½	0.39½	0.39⅜	0.39⅞	0.40	0.39¾	0.40¼
December Barley..	0.58	0.57	0.58	0.58	0.58½	0.58½	0.58½	0.58½	0.58½	0.59	0.59	0.60	0.63	0.63
September Rye....	0.69½	0.69½	0.69⅜	0.72⅛	0.75	0.75	....	....	....	....	....	....	....	....
December Rye....	0.70½	0.70½	0.70⅜	0.70	0.70⅜	0.69¾	0.70¼	0.70⅝	0.71⅜	0.71½	0.71⅝	0.71⅝	0.72	0.74⅛

The Elevator Operator

IS STATIC ELECTRICITY DANGEROUS IN FLOUR MILLS AND GRAIN ELEVATORS?

Static electricity produced by the mechanical equipment of the operating process in mills and elevators has been the cause of many of the dust explosions labeled "from an unknown cause." How often do we read about dust explosion losses and how very seldom do we ever see printed the exact cause, says Mr. George H. Rice, Inspector-Engineer for the Hartford Fire Insurance Company, in the "American Miller." Investigators oftentimes spend weeks prying into the cause or causes of a certain dust explosion loss only to come forth at the end with a report that the cause—or all evidence of the cause—was destroyed and that the explosion was from an unknown cause. Over 90 per cent of the losses investigated and reported upon have been labeled "from an unknown cause." Generally, several causes are suspected but in very rare instances has the investigator been able to place his finger upon the exact cause.

Provisions should be made in all mills and elevators where heavy fast moving belts, machines, etc. are in operation for the control of this dangerous hazard—*static electricity*. Effective results have already been obtained in many mills by proper grounding methods. Electrical engineers—or even mechanics—engaged in plant operation should give this particular cause their consideration that effective preventive installations may be developed.

Each year's record shows that there are from one to six disastrous dust explosions and fire losses due to explosions in the mills and elevators of the U. S. and Canada. An extensive investigation has always been made after each one of these losses by engineers from the Dust Explosion and Prevention Department of the Bureau of Chemistry, Washington, and by the engineers of the several insurance companies interested.

In very few cases has any definite known cause for the explosion been actually discovered.

Generally, many theories are advanced—deductions are made from these many theories—finally two or three causes are derived and that is about as far as the engineers ever get towards determining the real cause of the explosion and loss. All evidence is destroyed—little is generally left. How can a definite cause be attributed to the loss! Engineers on these investigations always work under a great handicap—for as stated above, practically in every instance the necessary information desired has been completely destroyed in the explosion or the fire that followed. In a great number of cases labeled as "from an unknown cause," could the exact cause have been determined by the investigation it would prove to be from or directly traceable to *static electricity*.

Great Danger Seldom Recognized

This is somewhat of a broad assertion to make but those familiar with "static" phenomena—that later will be proven to be ever-present in the mills and elevators—will agree that there exists a very great danger seldom recognized. If that very dangerous condition constantly exists—why then could it not be the cause of many of these unknown dust explosions? It is! Like all other causes—all evidence of its existence is destroyed when the explosion occurs or after the fire has burned its way through.

What is this static electricity? That is the question that is so oftentimes asked by those less familiar with the terms or the phenomenon. Webster says: "Friction between two dissimilar bodies produces static electricity, or, as it is sometimes called, frictional electricity." Perhaps this will be better understood if a few little experiences—experiences familiar to all—especially in our childhood days, are recalled. On a day when the moisture in the atmosphere is conspicuous by its absence, many of us have tried the trick of shuffling rapidly over a carpeted floor, to grasp some metal object, thus receiving a distinct electrical shock. What produced this shock? Not the metal—surely—as some suppose, for if touched without the preliminary shuffling, no shock is felt. What is it then? The friction of the feet on the carpet produces a charge or a series of charges, as the case may be, of static electricity, which accumulates in the body. Contact with any metal object, —which in turn is connected with the earth directly or indirectly,—causes this electricity to be discharged with a slight or sometimes a decided shock.

As a youngster it was a favorite "stunt" of mine to light the gas by producing static electricity by this "Shuffling-on-the-Carpet" trick. Seated upon my father's shoulder, I would turn on the gas. My father would step back a few yards, then advance towards the gas fixture shuffling his feet on the carpet floor. When under the gas fixture he would stop and I would touch very quickly the gas-tip and the "snappy" little spark from the finger would ignite the flowing gas. Once this gas was ignited it would continue to burn as though it was lighted by a match or an outside heat agent. This little experiment readily shows that the heat generated within this electrical discharge was enough above the ignition point of this illuminating gas to ignite it or otherwise it would not have ignited.

(To be continued)

CANADIAN LAKE PORTS WANT LARGER SHARE OF GRAIN TRADE

Winnipeg.—Feeling that unfair and discriminatory lake freight rates are levied by Canadian lake carriers against wheat from the head of the Great Lakes to Georgian Bay as against the rate from the lake head to Buffalo, Winnipeg exporters are straining every effort to have the Canadian coastwise regulations suspended so as to admit competition of United States boats.

It is charged by exporters that the alleged discriminatory rates operate gravely to the disadvantage of the shipping of grain by Canadian routes and virtually force it through United States channels by reason of the cheaper lake freights prevailing between Canadian and United States ports. Wheat which is sought to be routed from Fort William to Seaboard via Port Colborne, Ont., is subjected to a lake freight exaction anywhere from half a cent to one cent a bushel higher than similar wheat shipped from Fort William to Buffalo.

The Elevator Operator

FORT WILLIAM'S SAMPLE TRADING MARKET PREPARING TO OPERATE

Fort William.—The provisional directors of the Fort William Sample Market and Produce Exchange, charter for which has been secured, are Messrs. J. P. Kenny, F. H. Spence and A. B. Evans, all of Fort William, and as charter members of the exchange are seventeen other citizens of Fort William.

It is incorporated under the federal laws as a company without capital share and is entitled to carry on all operations in connection with the purchase and marketing of grain to provide facilities for trading on sample. At the inaugural meeting of the company, which will be held in the near future, at a date to be selected, permanent directors will be elected and the company will be ready to function.

Mr. J. P. Kenny, who has been the moving spirit in securing this charter, stated recently that he had secured the promise of the trading room in the grain exchange building for displaying the samples which will be offered for sale, on terms which he considers very favorable, and will thus have a ready-made trading room at his disposal.

AN UP-TO-DATE ELEVATOR

View of N. M. Paterson & Company's new elevator "O" at Fort William, Ont., particulars regarding the construction of which appeared on page 24, "Canadian Milling & Grain Journal" issue of August 15, 1922.

As soon as the inaugural meeting is held, Mr. Kenny will leave for a round journey to Duluth, Minneapolis, Chicago, New York and Montreal, and expects to have no difficulty in securing a large membership among the grain-buying fraternity in those cities. He has already paved the way, he says, and anticipates that he will enlist their co-operation and that they will arrange to have representatives here to purchase grain as it comes on to the sample market.

Having been a member of both the Winnipeg and Montreal grain exchanges and having made a special study of sample market trading in American centres where the system exists, Mr. Kenny believes that he has designed, in his charter, a means for giving the millers of the east the kind of grain which they wish to have and to ensure for the farmer a better market for their 'tween-grade wheat, and believes that he has found a way of eliminating the weaknesses which have caused former efforts to promote sample trading here to fail.

STATISTICAL EXPERT DISCUSSES GRAIN FREIGHT RATES AND ROUTES

Winnipeg.—Combined freight rates and charges between Western Canada and Europe are at present lower by the lake-and-rail and Atlantic coast route than via the Pacific coast, says Mr. W. Sanford Evans in a recent issue of The Grain Trade News. Whether, when freights go to the all-rail basis, some Alberta wheat can move out through Vancouver cannot, Mr. Evans says, be definitely foretold. In any case the present capacity of the western route is comparatively small. The western route can be no appreciable factor in the moving of an exportable surplus of 289,000,000 bushels of wheat this year.

On existing tariffs, Mr. Evans writes, the lake-and-rail freights to the eastern coast are so much lower than the all-rail freights that all export wheat must move by the lakes, while navigation is open, and it is cheaper to ship extra quantities before navigation closes and incur additional storage and other charges in the east until the grain is needed for export, than to wait for the export date and move the cargo all-rail. Moreover, the capacity of the all-rail lines is limited. With existing equipment and the demands of other traffic the all-rail lines could move only a small part of a farm surplus as big as that of 1915. The spread between Liverpool and Winnipeg prices will tend to be based on lake-and-rail freights, and, in any event, the bulk of the wheat must of physical necessity move by the lakes.

For many sound practical reasons the importing world takes delivery of wheat and flour in approximately equal quantities week by week throughout the year. This applies to the aggregate of the deliveries from all exporting countries. From any one exporting country the world may draw more heavily at one season of the year than at another, provided it is found expedient to adjust the difficulties by varying the shipments from other sources of supply.

In conclusion, Mr. Evans says that if Canada is to provide one-half of the importing world's requirements during the present crop year, its exports will be more subject to the rule of regularity than in years when its surplus is smaller. Countries buying Canadian wheat for quality in their blend of flour will always, of course, desire a regular flow of shipments.

WILL ADOPT OUR HANDLING SYSTEM

Port Arthur, Ont.—Mr. W. J. Skillicorn, of Johannesburg, Union of South Africa, representing the South African Government, has been visiting the grain handling and elevator plants here, seeking information on behalf of his Government in the method of handling grain in the United States and Canada. In South Africa, Mr. Skillicorn said, the sack system is in vogue, and with the advent of a policy to go into the business extensively, the Government has decided to locate at harbor and interior towns grain elevators and to adopt the Canadian method of handling.

Elevator, Mill & Personal Notes

Winnipeg.—During the month of September last forty-four Carter Disc Separators were sold by the Strong-Scott Manufacturing Company, Ltd.

Maria, P.Q.—Mr. Fedele Gagne, has completed the installation of a 50-barrel Midget Marvel Mill, purchased from the Pollard Manufacturing Company, Ltd., Niagara Falls, Ont.

Woodstock, Ont.—The buildings of the Tavistock Milling Company, Ltd., owned by Messrs. Ratz & Sons were, with all their contents, recently destroyed by fire. The outbreak is believed to have had its origin in the engine room. The loss estimated at approximately $200,000, is only partly covered by insurance.

Alvinston, Ont.—On the first day it started operations this year the plant of the local flax mill was completely destroyed by fire, the origin of which is unknown. The mill was valued at $7,000. Its predecessor was also destroyed by fire some time ago. Machinery in the building was valued at $5,000, making the total loss $12,000.

Port Dover, Ont.—The new plant of the Regal Poultry Feed Company, Ltd., here, is now almost ready for operation. The building is four storeys high and has storage space for 15,000 bushels of grain.

Bloomfield, Ont.—The Bloomfield Milling Co-Operative Company, Ltd., is making extensive improvements to their plant, and installing a 25-barrel Midget Marvel Flour Mill.

St. John, N.B.—The St. John Milling Company, Ltd., has been incorporated here for the purpose of grinding corn and other grain. It is said to be the intention of those behind the new company to take over the business of some other manufacturers in this line.

St. Pascal, P.Q.—Mr. Joseph Chouinard has purchased a 25-barrel Midget Marvel Flour Mill from the Pollard Manufacturing Company, Ltd., Niagara Falls, Ont., and same has been installed and is now in operation and giving complete satisfaction to its owner.

Vancouver—The first Canadian grain booking made from Vancouver to Europe in 1921 was on October 28th. This year already 56,000 tons have been booked from the Pacific coast port to points in Europe.

Calgary.—More grain is being shipped from Alberta to the Pacific Coast this year than last, the Dominion grain inspector announces. Most of the grain is of the finest quality. Only Number 1 hard and No. 1 Northern is accepted at Vancouver.

C.P.R.'S GRAIN MARKETING RECORD

Winnipeg.—From September 1st to October 5th the Canadian Pacific Railway has marketed 68,272,-864 bushels of grain, according to a statement issued from the Winnipeg offices recently. During the same period 35,484 cars were loaded. which is equivalent to 51,180,789 bushels. The previous highest figures recorded were in 1915, when the company marketed 32,023,000 bushels and loaded 22,472 cars, which is equal to 29,887,760 bushels.

Mr. George Thompson, of Thompson & Sons, grain merchants, Grain Exchange, Winnipeg, returned recently from a trip to the Pacific Coast.

Hon. J. A. Robb, Federal Minister of Trade and Commerce, left Ottawa recently for Australia where, on behalf of the Dominion Government he will conduct negotiations with a view to the execution of a reciprocal trade treaty between this country and the Commonwealth.

Mr. S. S. Pocock, who for many years was connected with the N. Bawlf Grain Company, Ltd., Winnipeg, lately being in charge of the company's export department, returned recently to Calgary where he has opened a grain commission business on his own account in the Lancaster Building. Mr. Pocock's many friends will wish him success in his new venture.

Mr. F. C. Cornell, secretary of the National Millers' Association, Montreal, returned recently from Winnipeg where he attended the hearings before the Dominion Board of Railway Commissioners into the charges preferred against the private terminal elevator interests by Hon. Geo. Langley representing the Saskatchewan Co-Operative Elevator Company, a summary of which will be found on page 22, in this issue of "Canadian Milling & Grain Journal."

Messrs. James Richardson & Sons, Limited, of Kingston, Ont., with offices at Montreal, Quebec, Toronto, Fort William, Winnipeg, and other important Canadian points have opened a branch office at 107 C.P.R. Building, Edmonton, Alta. Mr. W. V. McLean has been placed in charge.

Mr. James Stewart, president of the Maple Leaf Milling Company, Limited, visited the head office of the company in Toronto recently.

Mr. W. T. Moore, of the Georgian Bay Milling Company, Ltd., Meaford, Ont., was a recent caller at the office of the Dominion Millers' Association, Toronto.

Mr. M. A. Pollock, manager of the Canadian Flour Export Company, Limited, Royal Bank Building, Toronto, returned recently from a business trip to Montreal.

Mr. R. Hetherington, secretary of the Dominion Grain Commission here, has been appointed by the Minister of Trade and Commerce as acting general manager of the Canadian Government Elevators, succeeding Commissioner J. P. Jones, whose resignation from the board took place in September, and who had, up to that time, included the management of the elevators with his other duties.

Chief Commissioner L. H. Boyd, K.C., of the Dominion Grain Board, Fort William, Ont., was a recent visitor in Montreal and Ottawa.

Mr. F. H. Bole, of the Bole Grain Company, Winnipeg, visited Fort William on business recently.

Toronto.—John MacKay, accountant at the Government elevator at Port Colborne for the past seven years, died recently at the Wellesley Hospital here, following an operation. Mr. MacKay was ex-mayor of Renfrew, and well-known there and in Ottawa.

Leading Grain Exporter Discusses Trade's Shipping Grievances

"We think that we should be able to get Canadian wheat from Port Arthur and Fort William to the Canadian ports on the Georgian Bay as cheap as to Buffalo, and we object to Canadian shipping regulations being used to increase the cost of handling wheat between Canadian ports as compared to that from Fort William to Buffalo." This was the explanation of the situation given by Mr. James Carruthers, one of the largest exporters of Canadian wheat in the Dominion, with regard to the recent application of the grain trade to the Minister of Trade and Commerce at Ottawa for a suspension of the port to port regulation until the end of the season, so as to relieve congestion, and stop any tendency toward discriminatory rates against Canadian interests.

Upwards of 85,000 of the modern hopper-bottom cars shown in the above illustration are being utilized by the Canadian Pacific Railway in marketing Canada's great 1922 crop.

"Under the present shipping regulation," said Mr. Carruthers, "American carriers cannot take grain from Fort William to the Georgian Bay ports without touching at an American port, and we want that regulation suspended. We figure if that were done to the end of the season it would ease the situation. Naturally we want all the Canadian wheat possible sent to seaboard by the Canadian route, and this year we want more than ever, to offset the early opening of wheat shipping at Portland, Me. That is what we are after, and why we are asking the Government to suspend the regulation."

"The trouble is this," continued Mr. Carruthers. "We can get bids for all the freight we want from Fort William to Buffalo by the lake carriers for October loading, but they won't offer us anything at all from Fort William to the Georgian Bay ports. Now the distance from Fort William to the Georgian Bay ports is much shorter than that to Buffalo, so we figure that the lake carriers should give us at least an equal rate, or less, instead of discriminating against the Canadian route. I have a quantity of wheat west, and have been trying to get it down to the Georgian Bay for immediate shipment to Montreal by rail, but I got telegrams saying our agents could not even get bids for this freight for October, while they could ship all they wanted through to Buffalo."

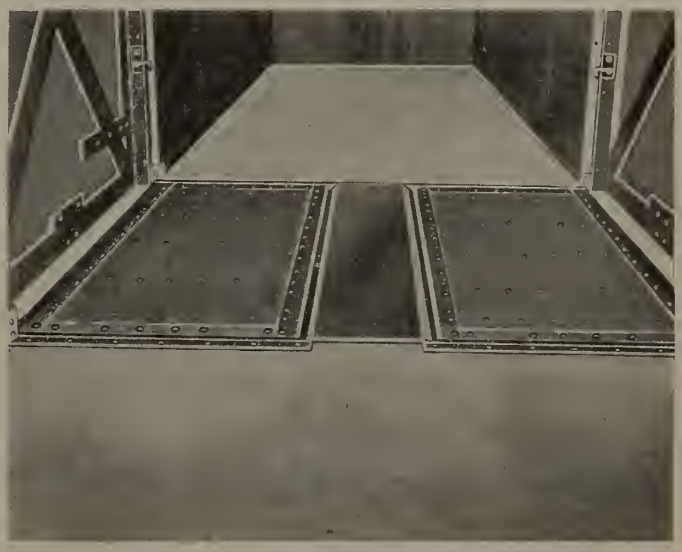
Coal Cargo Factor

Mr. Carruthers said a possible explanation of this might be that there were large quantities of steam coal waiting at Buffalo and other American lake ports for shipment to Fort William before the close of navigation, and the lake carriers were favoring wheat to Buffalo, so as to make it easier to get the return coal cargoes.

His firm, said Mr. Carruthers, would prefer to ship their grain direct to Montreal by the water route from Port Colborne, but it was hard to get the shipments forward, as all the ports were greatly congested, both Port Colborne and the Georgian Bay ports. To any appeal for equal rates to the Georgian Bay ports the carriers merely declined to quote rates, saying they wanted to go to Buffalo for the coal business back.

Portland Shipping

Another feature, said Mr. Carruthers, was that Portland was, for the first time in his recollection, already running Canadian wheat out. Previously his firm used to ship to Portland in November and December for winter storing, but this year there was already a steady stream of tramp steamers at Portland looking for grain cargoes, and getting Canadian grain which would otherwise be shipped from Montreal. His firm was at present shipping large quantities of grain from Port Colborne to Montreal by rail, at considerable added cost, in order to get speedy shipment.



The above illustration shows the interior of one of the Canadian Pacific Railway Companys' hopper-bottom cars which are assisting in marketing the 1922 crop.

"They are running Canadian grain from Fort William to Buffalo with early bookings at lower rates than the Canadian lines," said Mr. Carruthers, "and

the Canadian carriers now won't even quote rates. Why shouldn't we carry our grain by the Canadian route at equal rates?"

Mr. Carruthers said there had always been complaints of discrimination against the Canadian route since the coastal regulations had been adopted, but they were worse than ever this year, owing to the congestion, and he hoped the Government would take the action asked for by the grain men and the Montreal Board of Trade, and suspend the regulations to the end of the season.

Rates Quoted Looked Like Hold-Up

Subsequent to the above discussion of the situation Mr. Carruthers stated that his agents at Winnipeg had succeeded in getting quotations for wheat cargoes from Fort William to Georgian Bay ports.

"Our agents wired that they had succeeded in getting quotations of eight cents a bushel for the Canadian route for our wheat, as compared with around five cents a bushel for the American route to Buffalo, which is a good deal longer," said Mr. Carruthers.

"On receiving this telegram I simply wired it on to Hon. James Robb, Minister of Trade and Commerce, at Ottawa, with the single comment, 'Don't this look like a hold-up?' "

Mr. Carruthers said that was the last he had heard of the matter so far, but he was in hopes that the telegram to the Minister of Trade and Commerce would help along the application for suspending the port to port regulations on American lake carriers until the end of the season. If this could be secured, Mr. Carruthers argued, it would at least make more competition for the carrying of the Canadian grain by the Canadian route, and probably bring down rates.

WHY CANADA'S FLOUR EXPORT TRADE WITH FRANCE IS DECREASING

One hundred and twenty-five flour mills have been rebuilt and equipped with modern machinery in the war devastated region of France. This total represents fully rebuilt mills and does not include those that were only slightly damaged and which have been repaired. According to figures recently received 425 machines have been installed in the rebuilt mills with a capacity of approximately 1,500 tons per twenty-four hours.

The locations and equipment of the above mills are as follows:

Departments	No. of mills rebuilt.	No. of machines per mill.
Pas-de-Calais	20	91
Nord	42	115
Somme	9	46
Oise	4	13
Aisne	23	99
Ardennes	12	29
Marne	6	24
Meuse	3	..
Meurthe-&-Moselle	5	6
Vosges	1	2
	125	425

The mills were rebuilt through the operations of the Comptoir Central d'Achats, an industrial organization for reconstruction work in Northern France.

AN INTERESTING CONTRAST

The following is quoted from the columns of a well-known English milling journal, of recent issue:

> "The unremunerative character of flour milling (in England) is becoming more pronounced than ever. The opportunity to retrieve the position somewhat during the decline in wheat prices has been lost because the trade has no mutual principles on which it may resist adverse conditions and re-establish itself. It is notorious that the majority of millers are losing money heavily, but flour has been reduced in price in sympathy with the lower quotations for wheat without sufficient reference to cost of manufacture and distribution, and the position to-day is no better than it was three months ago."

On the same day that the English journal containing the above item was received in Montreal the following item appeared on the financial page of a Montreal city daily newspaper.

> Ogilvie Flour Mills Company, Ltd., have declared a quarterly dividend of 3 per cent. and a bonus of 10 per cent. The current bonus makes a total of 22 per cent. for the year.

INSPECTED NEW GRAIN CLEANER

Winnipeg.—At the Agricultural College recently some hundred and fifty grain handlers, representatives of machinery supply houses and grain growers, had an opportunity of seeing a new grain cleaning apparatus tried out.

The new cleaner was attached to a new Case Separator and a few loads of wheat bundles, very bad with sow thistle, were used for the test.

Some delay was occasioned in getting the machine started. During the progress of the test a quantity of wild and tame oats, wild buckwheat, mustard, French weed and other foul seeds, were mixed with the threshed grain before it went through the cleaner.

The work of the machine was very good and all foreign matter was separated with the exception of some rag weed, and a few thistle balls. — Weekly Market News & Financial Farmer.

FLOUR EXPORTS TO IRELAND

Ottawa.—Ireland is now endeavoring to import directly through Belfast and other large Irish cities, and to encourage the larger consumers to import direct in cargo or part cargo lots.

At the present time there is a good market for Canadian flour in Belfast, and if the large bakeries can be prevailed upon to import their flour direct from Canadian sources, this market will increase. Some of the flour connections, through middlemen located in Great Britain, extend for a period of more than 30 years, and now the Irish wish to do their own buying.

It is believed that it would certainly pay for Canadian flour exporters to thoroughly investigate the Belfast field at the present time."

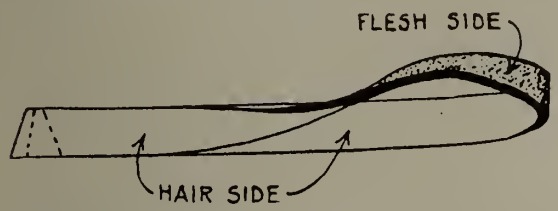
The practical miller who does not use corrugated rolls for the reduction of original middlings is missing one of the best things that have come to use in a long, long time.

THE PRACTICAL MILLER

WHEN CUTTING BELTS

The usual practice when cutting a belt is to use a square and make the cut absolutely square with the sides of the belt. However, if done in the manner illustrated here it is not necessary to make the cut square. The important thing is to simply make the cut "straight."

This is done by giving the belt one turn as shown and by laying the ends one exactly over the other, both in perfect alignment. Then by making the cut "straight" even though not square with the sides,



it will be found that the ends will make a perfect fit. The cut may make an angle of 45 degrees or even more with the sides. It makes no difference.

Of course, it is usually best to cut the belt square, or as nearly square as possible. By cutting it square belting material is more likely to be saved than where the cut is made at an angle. But to be doubly sure, even if a square is used, it is a good plan to give the belt one turn as explained here and then if the square itself is not true, or if an error has been made in some way or other, the cut will automatically rectify itself.

THE PROPER HEATING OF MILLS

Heating a mill is one of the most important things about a well-regulated mill, because it makes satisfied millers, and assists in making good, uniform flour. No mill should be without heat of some description in order to make it comfortable to do things, for what interest can any man take in his work if he is freezing to death while trying to do his duty? How can a miller do any grinding if his hands are cold; or what interest can a good miller take in his work when he is too cold to do anything? Not much, and it will soon be cold weather, and it is time to make all preparations for the heating. If a proprietor has a desire to be good to his workmen, he cannot satisfy that desire in any better way than to put heat into his plant, and it will be a good investment, as the men will be able to do steady work instead of spending half their time at a stove getting warm.

Cereal Chemistry Department

IN inaugurating under the above heading a new department which will be devoted to cereal chemistry, "Canadian Milling & Grain Journal" takes pleasure in announcing that all questions received from millers on any phase of cereal chemistry will be answered herein by Mr. S. J. Lawellin, president, and other members of the American Association of Cereal Chemists. Mr. Lawellin's position as head of the cereal department of the Milton Hersey Company, Limited, Paris Building, Winipeg, Man., and his acquaintance with chemists in the Dominion, places him in an excellent position to handle these questions. Both questions and answers will be published in this column, and while no names will be given, all communications must be signed.

RESEARCH WORK AND BETTER MILLING

Laboratory examination is to-day an invaluable aid to the miller manufacturing his flour and to the merchant who has to distribute it. Some day the methods of laboratory examination will be sufficiently developed and refined so that flour may be purchased and sold upon a flour chemist's statement as to its quality. That this cannot be done to-day is not so much due to the system as it is to the insufficient means yet developed to carry out the system. By this is meant that there are but few chemists of proper training and experience that of necessity much laboratory work is done by people who, while not altogether incompetent, have not the experience and training that would permit acceptance of their results as final. This fact is demonstrated by the varying results so often obtained when samples are sent to two or more laboratories for reports.

It should be the aim of everyone connected with the milling industry to devise a method of identifying and describing a flour in such a definite and official manner that there could be no dispute between buyer and seller as to the quality of a given lot of flour. Not only would this source of annoyance and trouble be removed but it would be easier for the miller producing a superior grade of flour to secure a price for it commensurate with its quality. Cheap competition would be greatly reduced in its effect.

Before a method of identifying and describing a flour can be worked out in a manner so that it would be acceptable to the trade as a whole, two things would seem to be necessary:

1. A form of report must be adopted that will be uniform in nature and so written that it can be understood by any flour man.

2. The work must be done so that the flour man will have confidence that the report accurately reflects the real situation.

HOME-MADE WOOD BEARINGS

Country millers who are as a rule isolated from their nearest base of supplies must often resort to home-made jobs, and in this connection there are times when it becomes necessary to put in a wood bearing which is perfectly safe and practical if the speed used is not too high and the bearing is properly made.

Here is a sketch of a conveyor end with the grain of the wood crossed so that no matter in what way the pull may come the strain will head the grain of the wood and wear indefinitely. The idea has been tried out with satisfactory results.

THE PRACTICAL MILLER

FAILURE OF PURIFIER TO FUNCTION IS USUALLY DUE TO ITS MISUSE

Sending dusty or floury middlings to a purifier is one of the present day abuses and one of the faults responsible for the failure of the purifier to purify. It is wasteful too. Floury middlings will not run or spread free on the sieve; the middlings tend to stick together making it more difficult for the air to get through and the flour dust clogs the mesh of the silk. This very fine flour dust that accompanies the middlings to the purifier will be drawn, part of it at least, to the fan and then reaches the dust collector, either to be sent direct to feed or ultimately to low grade, whereas if they were taken out before the middlings reach the purifier this flour would go to a higher grade.

One of the worst abuses is in the matter of feed. Can a purifier be expected to do anything else but poor work when the middlings going to it are allowed to pass through the feed gate in a thick and narrow stream, coming on the sieve perhaps in the centre or at one side, and racing down the sieve in this condition, instead of feeding to the sieve evenly and the full width?

Another abuse is that of exhausting to a dust collector inadequate to handle the volume of air discharged by the fan. Often with tubular cloth dust collectors the cloth filter tubes become clogged with a flour paste and allow but a minimum of air to escape or filter through, when all the air exhausted by the fan should escape.

Block the discharge of the fan and it ceases to draw, and the drawing power of a fan is governed by its ability to discharge freely. Many failures of purifiers can be attributed to this one fault alone. No type of dust collector should be used where such a condition is liable to exist. Sharp angles or short turns and many twists in the exhaust spouts affect the drawing power and capacity of fan in the same way, so far as results are concerned, as the inefficient dust collector.

A fault amounting to downright abuse is the placing of a sieve purifier, especially of the open type, or an aspirator in close proximity to some dust producing machine or leaky blow spouts, open grain or feed bins, or again near windows through which dust and smoke from the outside enters. The obvious thing to do is to remove the cause by stopping the leaks in blow spouts, covering the bins tightly, or placing a straining screen in the window if it is required to be open, this screen to be made of light flannel cloth.

One alternative, and perhaps the best, is to place a straining screen of thin light flannel in the side panels of the machine where the air enters, or in case of the air entering below the sieve, through the baffled hoppering. They can be removed periodically and brushed. These screens will strain the air, and permit sufficient air to enter the machine for the purpose. Also sweeping of floors and dusting off of machines should be so done as to make as little dust as possible.

SOME FACTS ABOUT GLUTEN CONTENT

It is well to bear in mind when discussing and analysing the effect of various manipulations as regards conditioning and milling, with the idea of their effect on the gluten in the wheat, that the important fact is that gluten does not exist in the grain or flour in the state of true gluten, or bakers' gluten. There is not a question of moving the gluten from one part of the berry to another, or of even crushing the gluten cells (which do not then exist). It is what effect can be obtained by any action that will materially alter the gluten-forming materials in the wheat, when they are being changed into the state of true gluten, or bakers' gluten, when in contact with water, the influence different temperatures may have, and also what action the natural enzymes have on the gluten forming materials. These are perhaps the great factors to consider, especially as the physical character of gluten is greatly modified by temperature.

WHEAT WEIGHT AND MOISTURE

The total weight of the flour, bran and offal obtained from a given amount of wheat, is never the same as that of the wheat. The invisible loss is due to some extent to the dissipation of fine dust, but chiefly to the evaporation of moisture through milling. On the other hand, mill products absorb moisture from the atmosphere when the wheat is dry and the mill air is humid. Tempering the wheat controls only the moisture in the wheat itself and this is not absolute so far as milling results are concerned. Recent experiments conducted in which all samples were tempered to 15 per cent of moisture before milling showed the limitations in this respect. Compared with the weight of the wheat before tempering, the samples containing from 9 to 9.9 per cent moisture showed a net gain in weight of total mill products for all relative humidities of the air; while the samples containing from 12 to 12.9 per cent moisture before tempering showed a net loss in weight of total mill products except for relative humidities of the air higher than 60 per cent.—American Miller.

DOES NOT EXPECT HIGH GRAIN PRICES

London.—The London Corn Circular, a leading grain publication in Britain, in a recent issue gives no ground for the expectation that good prices will be established and emphasized the fact that European nations who are prevented from importing by collapsed exchanges have been making every effort to produce sufficient grain within their own frontiers.

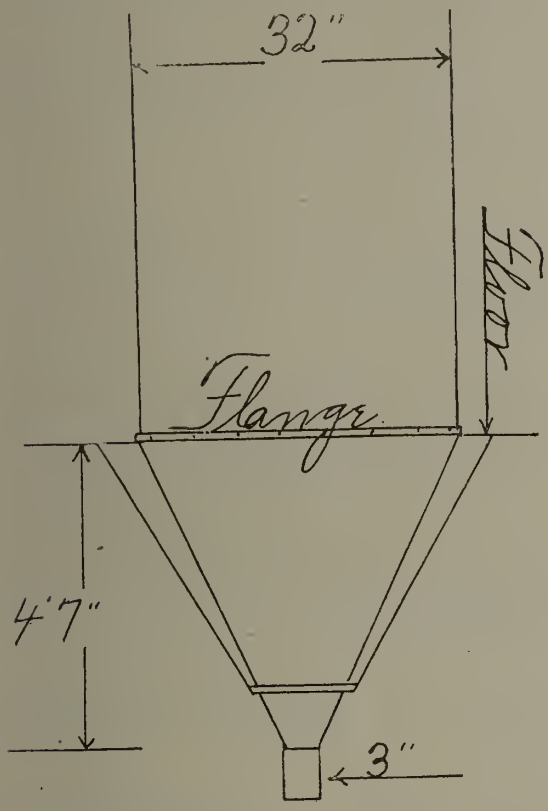
The German development of the process for extracting nitrogen from the air thus producing a cheap fertilizer was instanced as an indication of the extremes to which Europeans were going to increase their own crops. France alone will probably import a fair quantity of wheat possibly four or five million bushels.

THE PRACTICAL MILLER

USEFUL TEMPERING BIN IDEA

Small millers who are contemplating any improvements or changes in their tempering bins this season will, doubtless, be interested in the idea illustrated herewith.

It is well-known that the ordinary hoppered bin will not discharge the wheat evenly down the sides of the bin, that is, there will be a stream of wheat down through the center of the bin while the wheat at the sides will not move. Throw a bunch of wet wheat on top of the bin and notice how soon it reaches the outlet at bottom. If you will build a bin with dimensions as shown be very careful that there is no obstruction on the inside to hinder free flow



of the wheat. Notice all measurements carefully in the drawing. No height is given since this must be left to the room and requirements. Even though the wheat will flow down this style of bin evenly it would be a good plan to have at least two bins so that you can temper into one bin while grinding from the other.

In the event of larger bins than that specified being dealt with it may be taken that as diameter is increased if all other dimensions are increased in like proportion the results will be satisfactory.

As to the number of iron to use, this would depend on the height of the bin. Using one-third each of No. 18, No. 10 and No. 22 for a bin 24 feet deep, it should hold, if supported at each floor by heavy hoops which would rest on floor and it may be well to place a hoop around the tank between floors.

Follow directions closely as to the dimensions. Cover top of tank so as to prevent moisture escape. Be sure that flow of wheat from three inch opening will be free all around.

THE HEATING OF WHEAT

A practical miller who wished to design a wheat heater for installation before the first break rolls, recognized that his work would be aided if he knew the specific heat of wheat, that is, the number of British thermal units necessary to raise the temperature of wheat one degree. He approached a chemist on the subject, who replied to the effect that a value for specific heat is assigned only to compounds or elements of definite composition. There can be no value given for the specific heat of wheat, as the varying composition and physical characteristics of the grain would make this value only approximately correct. The chemist went on to say that this approximate figure would possibly be far from correct, and therefore misleading in any specific case. This reply about sums up the situation, although much more is known on these matters to-day than in the past. The advent of conditioning in its latest forms has done much to determine the effects of heat on wheat.

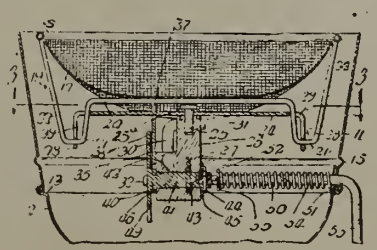
SCOUR WHEAT FIRST, THEN DAMPEN

To dampen wheat before cleaning is contrary to all precedent unless it is washing it. If wheat can be passed through the separator and scourers, dampened and sent to bins to temper as long as desired, then sent over the scourers to stock hopper, it will be found to be the best all around method of procedure.

To dampen wheat before scouring assists in imbedding that dust into the crease and also the fuzzy end of the berry, and after drying this is very difficult to remove by scouring.

Milling and Grain Patents

A new type of flour sifter of which an illustration appears herewith, is the invention of Mr. James H. Dean, Chicoga, Ill. The sifter comprises a sifter casing, a sieve basket removable from said casing, a diametric member fixed at its ends at the top of the basket, and having an intermediate part



and end loops depending below said immediate part. The action of the sifter is obtained by means of a bar mounted in the casing and capable of oscillation in a horizontal plane about a point midway of its length, said bar having stirrups adapted to be engaged by said depending loop, and means for oscillating the bar.

THE PRACTICAL MILLER

CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

WANTED MILL MACHINERY.—Advertiser can use small reel, about 30" x 48", also bran duster. Reply Box 127, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE.—Dust collectors. One No. 14 Perfection and one Cyclone style No. 6. Brand new. At exceptionally low prices. Also, few second-hand grinding mills, at bargain prices. Reply, International Agency, Room 416, St. Nicholas Building, Montreal, P.Q.

POSITION WANTED by miller with over thirty years experience in mills as miller, head miller and manager. Understands the buying and selling part of the business. Can furnish proofs of ability as to obtaining yield and quality. References. Reply Box 128, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED.—Ex-miller with long experience wishes to rent 25-40 barrel mill. Reply Box 125, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—One 50-barrel Midget Marvel Mill, with Cleaner, Elevator, Heads and Boots, Belt and Buckets, Transmission. Guaranteed good condition. Reply Box 126, "Canadian Milling & Grain Journal", Phillips Place Building, Phillips Square, Montreal, P.Q.

WANTED—Position as Head Miller. Applicant has had twenty-five years' experience operating mills from 50 to 400 barrels capacity. Can furnish first class references. Reply, Advertiser, 222 Wychwood Avenue, Toronto, Ont.

MILL FOR SALE

SEVENTY-FIVE barrel roller mill, modern machinery, separate elevator capacity 20,000 bushels. Flour warehouse, 60 tons capacity. Equipped with Chopper, Corn Sheller, and Oat Crusher. Electric Power. Reply Box 121, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED immediately. Flour salesman for Eastern and Western Ontario. Will give liberal terms to right man, who must be able to secure quantity distribution with good record. Reply direct to the James Goldie Company, Ltd., Guelph, Ont.

FOR SALE — Flour mill machinery. Practical enough to fully equip small mill. All modern and in good shape. Attractive price. Reply Box 116-6, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

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We must have your name and other particulars on accompanying form. Kindly fill in and return promptly.

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Daily Capacity .....
Power Used .....

THE PRACTICAL MILLER

The Question Box

With a view to making this department one of real service, "Canadian Milling & Grain Journal" cordially invites its readers to send in their problems to The Question Box. There are but very few millers or elevator operators who do not have worries in the proper conduct of their plants. It may be due to lack of experience or inability to trace cause and effect. The logical and sensible thing to do is to ask someone who may possibly know. Often he is not at hand, and still oftener the perplexed miller or elevator operator does not want to show his lack of knowledge. Under these circumstances he can address his inquiry to the craft through this journal. His name will not be divulged if he wishes to remain incognito. Someone is sure to reply who has had similar problems to meet or similar questions to ask. We guarantee to devote all the space necessary to the asking and answering of questions, so do not be backward in sending them in.

THE EDITOR.

QUESTION.—What would be a simple yet economical method for tempering wheat in small mills. —B.B.

ANSWER—Regarding the tempering of wheat for mills of 200 barrels or less, I would say the most efficient, economical and simple method is the following, and always scour the wheat before and after tempering.

If there is only a separator and a scourer the wheat should be run once over each, and if the scourer has a shoe, so much the better.

After the wheat had passed the two machines run it to the dampening conveyor from 2 feet to 6 feet in length and run just enough water on the same to cause the berries to adhere to each other, providing the wheat was dry at the beginning; then allow it to lie in the tempering bin for 6 to 24 hours, according to condition of the wheat and the amount of storage.

After tempering the wheat should be run through the scourer again to put it in good condition.

The man on the ground should be the judge regarding the amount of moisture to put on the wheat being milled.

By having two scourers the dampening and tempering can be done in a continuous flow without having to return through the scourer.

Never use anything but cold water unless the mill is unheated, then use warm water, and steam the wheat just over first break rolls.

The miller can soon become adept in wheat tempering by practice, and no man can inform him from a distance just how to temper because he is unfamiliar with the wheat being milled.

The most correct method for an inexperienced man is to temper lightly at the beginning, and keep putting more water on, according to just what is necessary to put the wheat into correct milling condition.

SECOND MILLER.

If flies are flies because they fly,
And fleas are fleas because they flee,
Then bees are bees because they be.

The Duster

It was visiting-day at the jail and the uplifters were on deck.

"My good man," said one kindly lady, "I hope that since you have come here you have had time for meditation and have decided to correct your faults."

"I have that, mum," replied the prisoner in heartfelt tones. "Believe me, the next job I pull, this baby wears gloves."

TO-DAY'S BEST STORY

A Montreal boy came home from the war with a trained cootie named Wilhelm. He was exhibiting Wilhelm who would jump over his finger, at command, to several flappers, who bent over the interesting exhibition. But Wilhelm jumped too high and got in the bobbed hair of the nearest lady, so she and a friend retired to search for him, and came back triumphant. Then the exhibition continued. "Jump, Wilhelm, jump—why—why—why that isn't Wilhelm!"

"Gunman Shoots Dead Alberta Police Officer." (Heading from daily western newspaper).

We always thought these gunmen went after the live variety.

Rufus Redd Dogg

"Suff'rin codfish!" exclaimed Rufus pausing to eject a stream of tobacco juice which narrowly missed an open box of pecans on the floor of the corner grocery store, "but sum people's eddication has shure bin neglected. . . Th' ol' lady foll'win' th' example o' Mrs. Si Hanks an' wan 'r two others tuk 'n sum city folks ez birders, 'n et supper las' night ther' wuz a lizzie feller fr'm sumwheres thet hed his fust battle with corn 'n th' hoof,—I mean cob. Well sir, when the dish wuz passed t' him this angel face tuk his fork 'n tried t' pry out a couple o' grains wan o' which flipped an' landed into th' artyficial curls of a jane fr'm T'rawn-ta sittin' nex' him.

"Tak' et up in y'r mouth man," I sez, sez I t' him, an' wud y' b'lieve et th' gazebo wropped his mitt roun' th' bottom o' th' cob an' started t' ate t' fr'm th' top down. He musta near bust a tooth f'r he glowered at me an' he coughs an' he sez, sez he, "Air ye tryin' t' make fun o' me Mr. Redd Dogg?" "I am nuthin o' th' sort I sez, sez I, p'inted like, I'm only tryin' t' teach ye table manners. Looka here, ye hev' t'ate a corn like a squr-rel ates a nut, tak' et up in y'r two paws like this, see, an' he did whut I tol' him. Well sir, when thet bird 'd knawed all roun' th' cob 'n fr'm end t' end an' ther wuzn't enuf left on 't t' feed a hungry skeeter, be dommed ef he didn't han' back th' cob t' th' ol' woman an' axed her ef she'd fill et up agin with peas f'r him. I wonder," concluded Rufus sadly, "ef th' poor gink wuz born thetaway."

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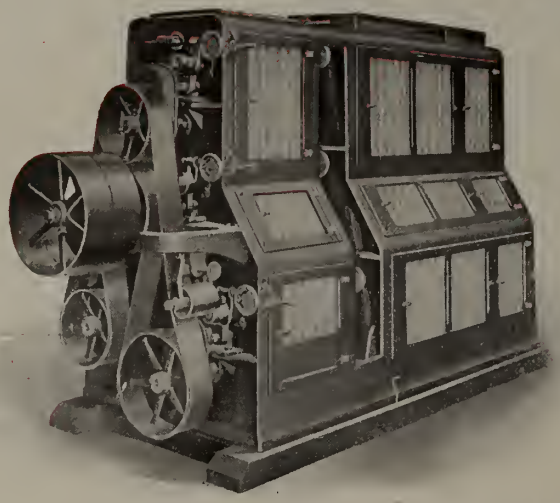

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THE MIDGET MARVEL will doubtless permit you to run to full capacity even though your water power is insufficient for your present system.

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Western Office: 1206 Union Trust Building, Winnipeg, Man.

CANADIAN
Milling & Grain
JOURNAL

VOL. III MONTREAL, NOVEMBER 1st, 1922 No. 19

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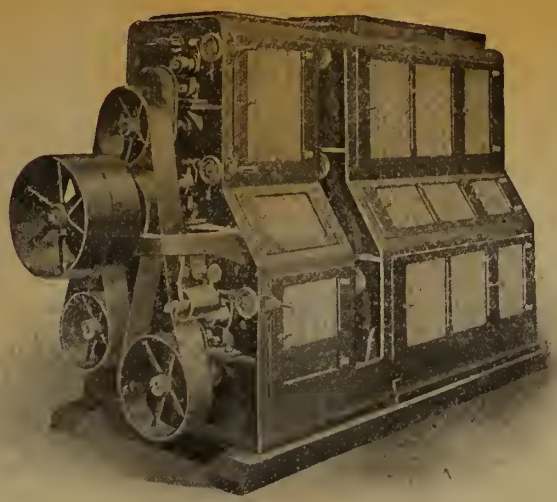
From a Milling
Standpoint

Economy in Power

(Only 15 H.P. required to run a 50 Bbl. unit.)

SUCCESS
From a Financial
Standpoint



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**Make this Mill the means to independence.
Many have already done so.**

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The Belting That Made Good!

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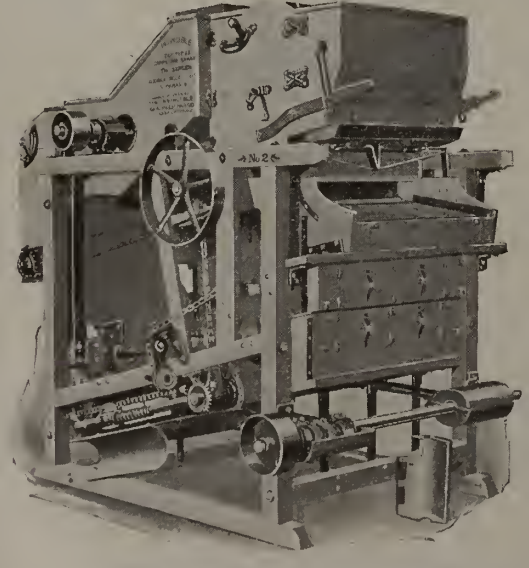
INVINCIBLE TRI-SCREEN (COMPOUND SHAKE) DOUBLE RECEIVING SEPARATOR



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IT WON'T TAKE YOU LONG TO UNDERSTAND WHY IT IS POPULAR

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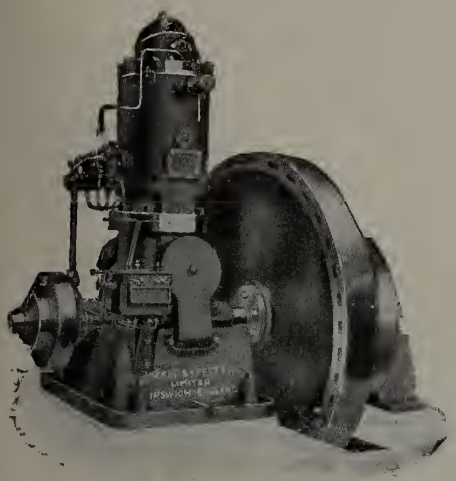

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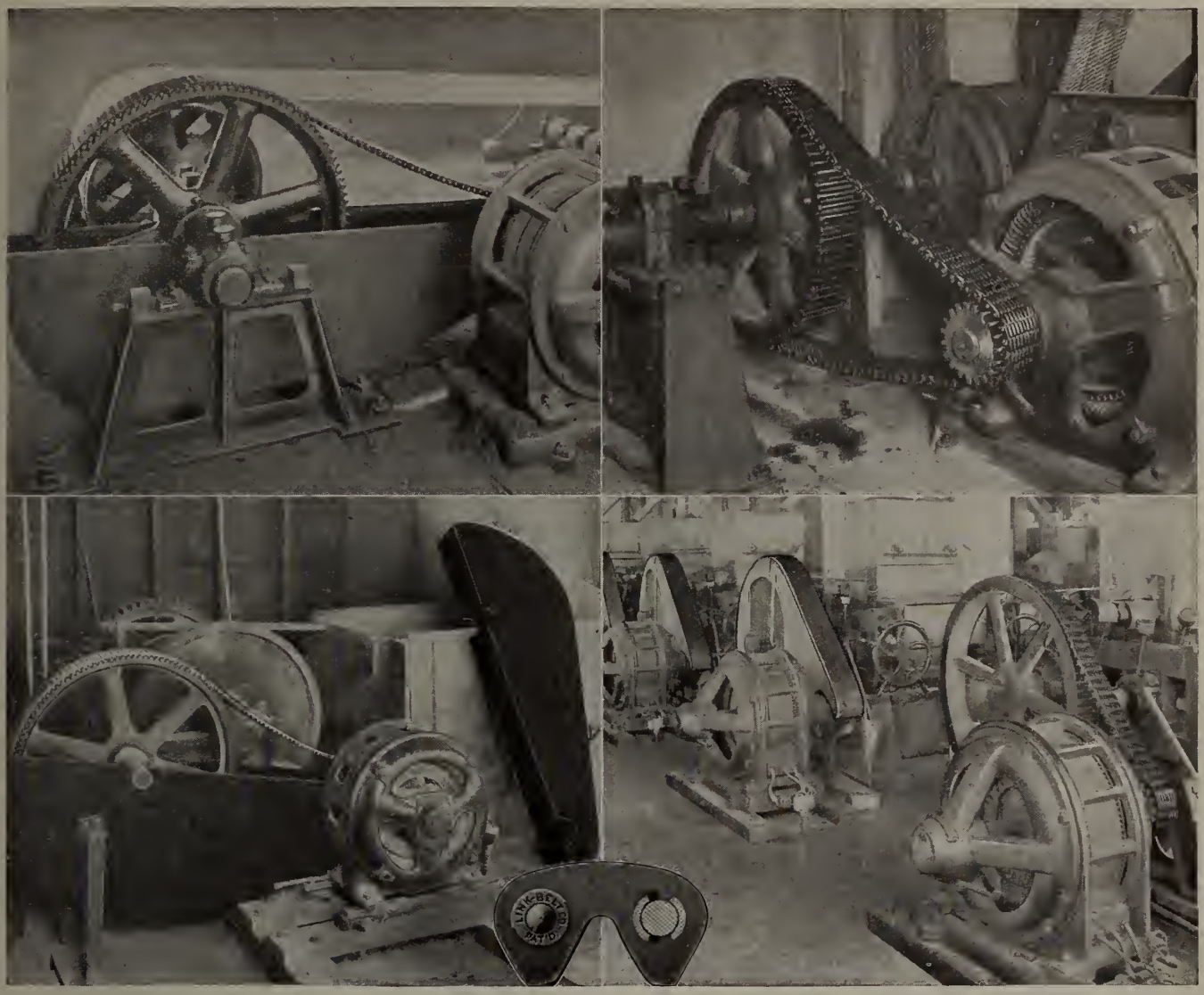

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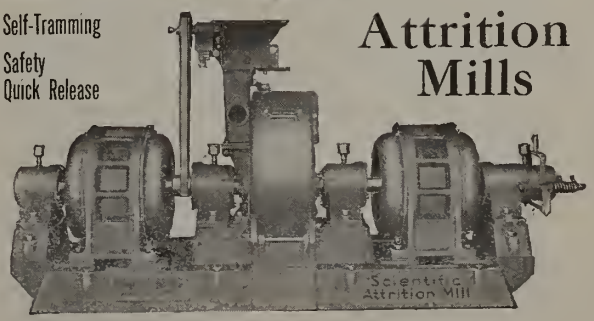

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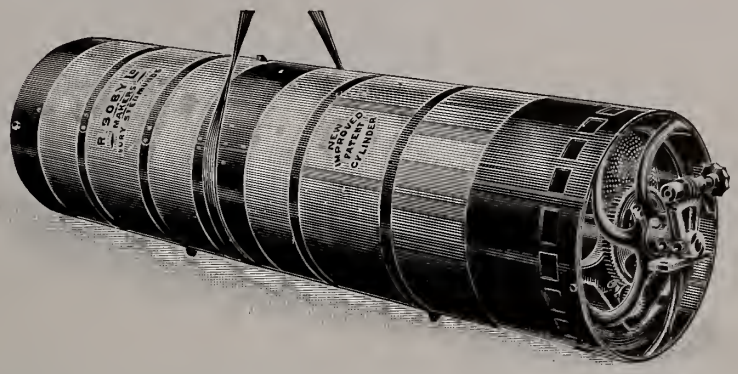

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These two objections can be removed at once, by removing the cause—oats, barley and obnoxious weed seeds from your wheat.

This important work is being done with complete satisfaction by the CARTER DISC SEPARATOR.

Here is what one user wrote us—

"The Carter Disc Separator has enabled us to clean our wheat better and remove every bit of foreign matter in the wheat, even to the smallest pin oat. We get a better color of flour, as nothing but absolutely clean wheat gets to our rolls. We would not be without the Carter for twice what it costs."

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VOL. III MONTREAL, NOVEMBER 1ST, 1922. No 19

CANADA'S ONLY MILLING AND GRAIN PAPER

"The Curse of Consigning"

ON pages 25-26, of this issue of "Canadian Milling & Grain Journal" will be found an article, originally published in The Northwestern Miller, in which strong condemnation and criticism of the practice of certain Canadian mills of doing export business on a consignment basis, is expressed.

It would appear from the article in question that both United States and British millers have a very whole-hearted and fatherly interest in Canadian exporters of flour. This is indeed strange, considering the fact that United States millers have never lost any opportunity of shutting out Canadian flour from their country; nor, it might be added, are British millers taking, with good grace, the steadily increasing exportations of Canadian flour to the United Kingdom.

One would imagine, from the article, that so far as Canadian millers are concerned there are practically none of them who have any training in the fundamentals of commercial business practices since three of the largest mills in this country are flatly accused of consigning. No benefit of doubt, is given as to whether or not this flour may have been consigned due to conditions over which the mills concerned had no control, and it would be interesting to know just how much flour was consigned to the Old Country, and whether or not this consigning of flour was not being done by someone else besides certain Canadian millers.

In a letter embodied in the article a British importer insinuates that Canadian mills are conscience-stricken and are endeavoring to give away the so-called tremendous proffts which they piled up during the war. This is indeed rich. What foundation has the un-named importer for his assertion that Canadian mills made huge profits during the war?

It can be easily understood that any industry which is enjoying the healthy normal increase in the export field that Canadian mills now are, is bound to be an object of criticism, insinuations and knocks from its competitors. So far as the question of the banking institutions in Canada, and the allegation that they are not alive to what is going on and what is being done with money they have on loan for commercial enterprises, can be left to the opinion of our readers without comment.

In conclusion, "Canadian Milling & Grain Journal" fully agrees with its contemporary that consigning of flour for export is a practice which should not be countenanced. The Canadian miller realizes the necessity of abstaining from this practice so clearly that were it not considered desirable to answer our contemporary, whose article is given in full, the subject would not be worth the space devoted to it herewith.

Proper Storage of Cleaned Grain

CLEAN grain should never be stored in old bins, granaries, or store-houses until they have been thoroughly cleaned and freed from the accumulations of waste grain and other materials harboring grain insects. Timbers in bins, granaries, or holds of ships that have become infested with grain insects should be destroyed or treated before being used again. Steel or concrete bins are highly desirable owing to the ease with which they are cleaned.

Bags of all kinds that have previously held grain should not be allowed in granaries or warehouses or be refilled until they have been sterilized or otherwise freed from insects that might fly in from the outside.

Unfulfilled Prophecies

IN the spring and early summer of the present year, when feverish efforts were being made by representatives of a certain section of the western grain growing fraternity to secure the imposition of wheat control on the country the principal argument advanced in support of the measure was that absence of control would mean demoralization of prices and consequent ruin for the farming community.

With the rapid passing of the crop moving season, however, it is quite evident that the predictions made were not inspired by what might happen to the farmer so much as by a desire to put the disposal of a bumper grain crop in the hands of a few who imagined that they could fix prices to suit themselves.

Another point made by the advocates of a Wheat Board was that such a board would make advances to the farmers who otherwise were in such a financial position that they would be compelled to sell on delivery. But what is happening? There are tens of millions of bushels in wheat in country, elevators, in transit and at the terminals which farmers have not sold. The banks and grain companies now, as always, are willing to make advances. In what respect could this situation have been improved by a Wheat Board?

Mr. Henry Wise Wood, one of the prime movers for control, predicted that under open market conditions a break in wheat prices, the like of which had never been imagined would occur when deliveries of the growers wheat set in. Deliveries, however, have been pouring in for the past month. Terminal points with their facilities which were deemed sufficient for even abnormal business are finding it all they can do to take care of the business offering. Furthermore, the market has remained remarkably steady on the basis of the world prices which were established last August before a single bushel of the new western crop had been moved.

On top of all this it is difficult to understand advices from the west to the effect that Mr. Wood, who, be it remembered, refused the chairmanship of the Wheat Board made possible by Ottawa, and made practicable by Saskatchewan and Alberta, and which fell through because no one could be found to assume its direction, is already endeavoring to revive the idea of wheat control.

"Consistency, thou art a jewel."

Incidentally, if any system of wheat control ever should be deemed necessary for Canada, "Canadian Milling & Grain Journal" would be among the first to urge that the provisions of such a measure should be drawn by one who understands the Canadian grain trade.

He Had No Case

ON August 17, Mr. Langley made an address before the Board of Grain Commissioners, which went out to the public as a sweeping arraignment of the private terminal elevator system and an imputation of corruption against the operators of these elevators and against Government grain inspectors. At a recent meeting of the Board at Winnipeg, all that Mr. Langley had to say resolved itself into a suggestion that the rules and regulations under which private elevators operated might with advantage be amended to improve the operation of the system, and even then he offered no concrete proposals.

The statement prepared by the private elevator companies, which was a conclusive presentation of the legality and legitimacy of the operations of these companies, turned out not to have been necessary at all, so far as any case before the Board was concerned, because Mr. Langley had changed his ground altogether.

No more glaring example of irresponsible and recklessly injurious speech could be found than Mr. Langley's august address to the Board. It was an address he should not have been allowed to make. The whole policy of sample trading is open to argument, and it is always possible that methods can be improved, but questions such as these can be argued on the basis of facts in a self-respecting manner. The trade made it clear they were prepared to co-operate in trying to devise improvements.—(Weekly Market News and Financial Farmer).

Volume of business is greatly to be desired, but if to get it, the elevator management is compelled to handle it at a loss because of the high competitive price paid for it, then it would be better if a smaller amount of grain was handled.

Other Points of View

THE LION SHOWED ITS TEETH

Providence Journal: The showing of Great Britain's armed strength made its application unnecessary and brought peace. It was the one argument that Kemal understood, even though the Prime Minister's critics have hotly disputed the propriety of it. They rage about the rudeness of it, and the millions of pounds sterling that it cost; but they have to admit that it convinced the fierce Kemal. Unlike many of the international conferences that Great Britain has engaged in since the World War, there was no fluke at Mudania.

NOT SALVATION, BUT RUIN

London Telegraph: The more carefully the proposal, with its inevitable reaction on thrift, is examined, the more apparent it must become that a Capital Levy spells national suicide. What we must do is not to increase the burdens and vexations under which the leaders of industry and commerce are staggering, but to reduce them.

THE "KEEP-OUT" POLICY

Chicago Tribune: Almost every border drawn in 1919 or since is a powder train. The area of danger has been extended over the whole region of Central and Eastern Europe and instability is greater than ever before. In this vast powder magazine imperial statesmen smoke the pipe of their dreams and the sparks will not always be stamped out.

ANOTHER WAR AVOIDED

Farmer's Sun:—Hon. Chas. Stewart has decided, it is said, to accept the proposition of the Six Nations Indians and refer their claims to arbitration. This is another war cloud removed from the horizon.

MORE TECHNICAL SCHOOLS NEEDED

Montreal Star: Undoubtedly more technical schools are needed in Canada, and it is most important that they should be provided. Complete and satisfactory progress will not be secured, however, until it is a recognized course of tuition in the daily schools. This, it is true, may involve cost, but it will be a very small part of the ultimate reward.

CRIME AND YOUTH

Los Angeles Times: Fifteen years ago the average age of persons convicted of crime was 41. Today it is given as 25 years. The young folks are taking rather readily to crime and the juvenile courts are cluttered up with cases. The reasons are that a lot of new crimes are related to the automobile and prohibition, and parental discipline is not what it used to be.

The poor condition of many cars at this time demands that closer attention be paid by grain shippers to preparation and coopering of the said cars, thus preventing consequent leakage and loss. This is a case where "a stitch in time" applies with great force. What a foundation is to a house, coopering is to a grain car—good, bad or indifferent, but it should be good.

Eastern Provinces
MONTREAL
Dubrule Building
Phillips Square Tel. Plateau 1983

MONTREAL NOVEMBER 1ST 1922

THE MONTREAL MARKETS

Flour.—As a result of their surplus output being sold in some cases up to January next, the inability of many millers to take care of export orders which continue to come in, has checked somewhat the volume of business apparent during the past few weeks. Not for many months has the export situation been so satisfactory, and it is confidently expected that these conditions will continue with ever greater improvement well into next year.

The domestic and country demand for supplies at prices unchanged from last report continues good and millers generally report a large volume of business passing in this respect. First patents are quoted at $6.50; second patents at $6, and strong bakers at $5.80 per barrel in jute bags, ex-track, less 10c per barrel for spot cash.

There have been no further developments in the condition of the market for winter wheat flour, the feeling being very firm at the late advances in prices. There has been a very good enquiry from domestic and outside buyers, but the volume of business was not large, there being sales of odd cars of choice grades being made at $5.30 to $5.40 per barrel, in second-hand jute bags, ex-track, while broken lots are selling at $5.50 to $5.60 per barrel in second-hand jute bags, ex-store. The demand for white corn flour is steady at $4.40 to $4.50 per barrel, in jute bags, delivered to the trade.

Grain.—The export trade in grain has been again quiet, the demand from English importers being still somewhat limited, and in consequence there have been few firm bids in the market for supplies for future shipment that could be accepted. Recent cables from London report the parcel market for Argentine wheat weak at a decline of 1s. to 1s. 3d. per quarter, while Manitoba wheat was in better demand and held at an advance of 4½d to 7½d. per quarter. Chicago wired recently that sales of 60,000 bushels of oats were made for export account, and also that a fair amount of business was reported in Manitoba wheat with a very good enquiry for rye.

Millfeed.—The enquiry for supplies from all sources continues good, but owing to the fact that millers in most cases are fairly well sold up of their output for some little time to come few straight carload lots are now offering, and sales in consequence are chiefly confined to broken lots in mixed car orders. Car lots of Manitoba bran are quoted at $21, shorts at $23, and middlings at $28 per ton, including bags, ex-track. The demand for standard grades of rolled oats is fairly good, and prices rule firm at $2.90 to $3 per bag of 90 lbs.

OUTSTANDING BONDS OF ST. LAWRENCE FLOUR MILLS CO., LTD., SHOW BIG DECLINE

Despite any business depression there may have been during the twelve months ended August 31, 1922, the annual statement of the St. Lawrence Flour Mills Company, Limited, covering that period, which was placed before shareholders at their annual meeting at Montreal recently, showed a substantial increase in profits. The strong working capital position of the company has been well maintained and certain extensions made on plants, while the outstanding bonds of the company now stand at less than $100,000.

Profits for the period under review amounted to $169,365, as compared with $147,801 the previous year, and $215,077 in 1920. The heavy programme of bond retirement is reflected in the small charge of $7,952, representing bond interests, as compared with $12,460 last year and $13,395 in 1920. The deduction of this item, together with $14,308 representing Government taxes, leaves net divisible profits at $147,103, as compared with $120,700 in 1921, and $173,249 in 1920.

LT.-COL. F. S. MEIGHEN
President of the Lake of the Woods Milling Co., Ltd., Montreal, the stock of which as a result of a substantial bonus distribution recently reached a new high for the year.

MAGNITUDE OF CROP MOVEMENT

Winnipeg.—The magnitude of the wheat movement that is at present going on in western Canada, and which has been in progress since the first of September, is gained by official figures of inspections at Winnipeg and from figures of the railways. During September 55,000 cars were loaded a total of one hundred million bushels of grain, all but one-tenth being wheat.

PERSONAL

Mr. H. N. Baird, of Messrs. Baird and Botterell, grain brokers, Winnipeg, was introduced on 'Change while in Montreal recently by Mr. Thos. Williamson, president of the St. Lawrence Flour Mills Co., Ltd.

OGILVIE COMPANY'S NET REVENUE FOR 1921-22 INCREASED NEARLY 30 P.C.

An increase of about 30 per cent. in net revenue over the previous year was shown in the annual financial statement covering the twelve months ended August 31, 1922, which was presented to shareholders of the Ogilvie Flour Mills Company, Limited, at the annual meeting held at Montreal recently. Mr. W. A. Black, vice-president and managing director, pointed out that a large part of the profits came from operations of the company not directly connected with milling, which, of late, had not been remunerative, as a result of excessive competition and unfavorable transportations conditions affecting the export business of the mills.

Vice-President Black Optimistic

Mr. Black, however, sounded a decidedly optimistic note with regard to the future. "Our Northwest wheat crop," he said, "is exceeding all expectations as to quantity, and the quality is most excellent, the average grading being much higher than for some time past, and this, with the increased yield, should offset the lower prices prevailing this season.

Outside of the consideration of the financial report, the only important development at the meeting was the intimation by President C. R. Hosmer to the effect that the company intends establishing a subsidiary company to handle the numerous investments of the company. No definite date has been set for the forming of this subsidiary, but it will come sooner or later. The necessity for such a step is pointed to by the investment item in the company's balance sheet, which is shown this year at $7,562,955.

QUOTATIONS ON BRAN AND SHORTS

The following nominal quotations on bran and shorts have been reported by the Canadian National Millers' Association, Coristine Building, Montreal, to the United States Customs Authorities as the prices of these commodities now in effect. These prices are the net cash prices in bulk, f.o.b., the mill:

	Bran	Shorts
Montreal	$18.00	$20.00
Toronto	18.00	20.00
Port Colborne	13.50	15.50
Fort William	11.50	13.50
Keewatin	12.50	14.50
Winnipeg	13.00	15.00
Moose Jaw	9.00	11.00
Calgary	8.00	10.00

TONNAGE SCARCE, CANAL RATES UP

Montreal.—Local shipping circles are keenly interested as to what will be the upshot of the chairman of the Harbor Commission's recent statement that there is a decided shortage in grain boat tonnage plying between Montreal, Lake Erie and Fort William. Shipping experts here uphold Dr. McDougald's assertion and if grain continues to come down in the volume of the present season the bidding for canal tonnage will become too high.

So keen is the demand at present that rates have gone up by leaps and bounds. One local shipping firm operating independently, but not on a large scale, was getting a rate of 5½ cents at the beginning of the season and was barely paying its way. To-day the same company is getting a 15 cent rate and is being handsomely recouped for the poor showing in the spring. The present high rate is not the result of manipulation but merely a reflection of supply and demand. A big demand for canal tonnage has sent prices soaring.

EXTOLLED MILLING INDUSTRY AT DOMINION MILLERS' ASS'N DINNER

Toronto.—Addressing the Dominion Millers' Association at their annual banquet here recently, Hon. Thomas A. Low, federal minister without portfolio, defended the Government's action in endorsing the Wheat Board, a measure opposed by the millers as a whole. He maintained that the Government would not be justified in obtaining the complete satisfaction of one group at the price of causing unrest and discontent in the western provinces. The action of the Government was really beneficial to the millers, for it was decidedly to the advantage of the members of Canada's greatest industry that the large group of men producing their raw materials should be contented and confident. The good faith of the Government in its desire to guarantee the millers' protection also was evidenced by the fact that to Hon. J. A. Robb, M.P., Minister of Trade and Commerce, himself a miller, was entrusted this legislation, and by the further fact that the flour and milling interests were exempted from certain clauses which might have been prejudicial.

Almost Exclusively Canadian

The milling industry, he said, was one of Canada's most foremost industries. Outside of one and a half million dollars in securities held in the United States, and one and a half million held in Great Britain, the industry was absolutely Canadian-owned.

Her flour and milled products carried Canadian export trade into forty-five different countries. The flour exports of Canada rank first in a list of over four hundred specific Canadian products. The export trade in flour and mill products has shown a steady growth from $2,000,000 in 1867 to the present volume of $58,000,000, approximately, in the last fiscal year.

The Canadian mills are capable of producing over 134,000 barrels of flour every twenty-four hours.

Yet, with this splendid development Canada is milling on the average only about 70,000,000 bushels of her vast crop of 300,000,000 bushels of wheat. With the steady opening of greater transportation facilities and the growth of foreign markets there was no reason why the remarkable growth in the exports of Canadian flour in the last twenty years should not be extended and the volume of export doubled in the next decade.

Hon. Mr. Low was, with Hon. Mr. Robb, one of the principal speakers at the dinner which concluded the recent annual meeting of the National Millers' Association at Montreal.

NEWS ITEMS

Mr. F. H. Robinson, Cookstown, Ont., installed a 50-h.p. Vickers-Petter Crude Oil Engine in his mill recently.

St. Mary's, Ont.—The St. Mary's Milling Company, Limited, assigned recently.

Ontario
TORONTO

TORONTO NOVEMBER 1ST, 1922

THE TORONTO MARKETS

Flour. — The export market for Manitoba straights has been firming up recently and sales have been made at from 37 ($8.19) to 38 ($8.41) shillings to the United Kingdom. Buyers, however, are not taking on any great quantity at these advanced prices. Ontario winter wheat flour still continues scarce, farmers being still busy on their land, and in consequence are not making any free delivery of wheat to Ontario mills. A few sales have been made for export at 36 ($7.97) shillings, but even at that price there is nothing in it for the mills, who have to buy their wheat in car lots. Ontario flour in the domestic market is worth anywhere from $4.65 to $5.00, Montreal freight.

Cereals.—A small amount of business is passing for export in both oatmeal and rolled oats, but at prices that are not satisfactory to the mills here. The value of rolled oats for export is around 41 ($9.07) shillings per 280-lb. bag, c.i.f. United Kingdom points, and for oatmeal 39 ($8.63) shillings per 280 lbs. Domestic prices are $2.90 to $3.09, in mixed car lots for rolled oats, per 90-lb. bag, and $3.20 to $3.35 per 98-lb. bag for oatmeal.

Millfeeds.—The domestic demand for millfeeds is rather quiet, but the United States markets are making big requisitions, although trade to the other side is hampered by lack of cars. Millers here can get $6 a ton more for their product on the other side of the line, but they cannot get the cars for large quantity shipments. Bran is quoted at $19.00 per ton, straight cars and shorts at $21.00. White middlings are selling at $27.00 and feed flour at $1.65.

Grain.—Price levels for grain have advanced somewhat, wheat and other grains showing a higher tendency than at the close of the market ten days ago, substantial increases over the low point of the season, established some weeks ago, being recorded. The strength which has developed in the European markets appears to be responsible for the latest advance. Export demand is fairly substantial and the transportation facilities, which have been very bad, are showing some improvement. During the past ten days trading on the Toronto market has been restricted owing to the car shortage, and dealers with connections at Ontario points reported that it was extremely difficult to get railway cars to carry grain to or from outside stations, with the result that business was very much curtailed. It is believed, however, that the worst of the transportation difficulties are over. Trading locally for consumptive purposes continues light.

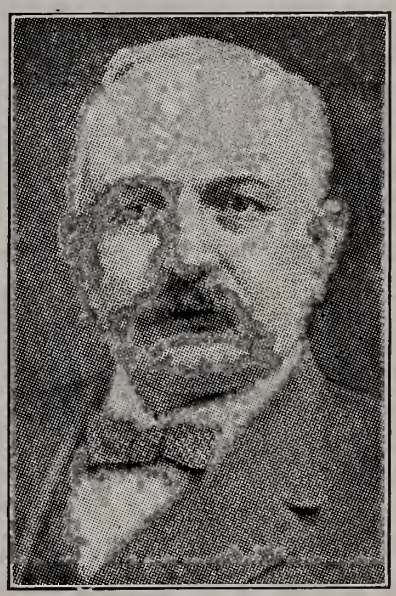
Alsike.—Price reductions in alsike seed at country points by Toronto wholesale firms are announced. Alsike is now being quoted at from $4.00 to $5.50. The new United States tariff on imports is largely responsible for the change in prices. On alsike the duty is $4.00 per one hundred pounds.

WESTERN CANADA FLOUR MILLS CO., LTD., HELD ANNUAL MEETING AT TORONTO

Toronto.—The annual statement of Western Canada Flour Mills Company, Limited, was presented to shareholders at the annual meeting here recently.

President Andrew Kelly, in his report to shareholders, in calling attention to the earnings of the Company during the year, pointed out that the value of wheat and flour as at the end of August, 1922, was practically on a pre-war basis. With regard to the future he called attention to the fact that the 1922 wheat crop would be from 380,000,000 to 400,000,000 bushels, which was much larger than the 1921 crop and was of good quality.

The profits of the company after provision for reserves amount to $318,125, as compared with $325,970 in 1921. After deduction of bond interest



ANDREW KELLY
President of the Western Canada Flour Mills Company, Ltd., Toronto; the annual report of which is summarized herewith.

at $70,560, net profits amount to $247,565, as compared with $251,267 the previous year. Dividends at the rate of 6 per cent. create a charge of $230,000, which leaves a surplus of $17,565. The addition of the previous balance of $202,103, leaves a total of $219,668 at credit of profit and loss account.

LAKE SHIPPERS ADVANCE RATES FOR LAST TRIPS AND WINTER STORAGE

Port Arthur.—Several valuable grain cargoes will leave the head of the lakes during the rush period preceding the close of navigation. In order to obtain tonnage shippers have been forced to advance carrying rates on wheat for the last trip and for winter storage. One large steamer that will be paid at the rate of $1,500 a day for all the time she is held at an unloading port has been placed to load at Fort William for delivery at Buffalo at five and a half cents per bushel. Another has been chartered at six cents. Quick dispatch is guaranteed. The rate for the last trip and for winter storage has been marked up as high as eight cents, and three large steamers have been chartered at this rate.

PET DOGGIE "SHOT THE CHUTE," WAS BURIED IN GRAIN, BUT EMERGED UNHURT

When Nellie, a pet fox terrier owned by Mr. A. H. Harvey, of 119 Ford St., suddenly found herself in the hold of the grain steamer Harry Yates, loading at the head of the lakes, reports the Fort William Times-Journal in a recent issue, the surprise was too great for her to give it adequate expression. She thought that a miracle had happened. The route by which she got aboard was one that no other had ever taken and come out alive.

Nellie was strolling round the Consolidated elevator taking in the sights and had climbed up as far as the bin floor, where she was much interested in the big belts conveying grain to the various bins of the house. One broad belt looked particularly attractive and Nellie decided that it would be lots of fun to take a ride on it. It was the belt which was loaded with grain destined for the shipping bin and the boat.

The end of the ride was an eye-opener for Nellie. First of all she shot down 55 feet of empty space, with a stream of grain pouring over her, into a sort of maelstrom of grain all tearing down to the loading spout. Without giving her time to utter a cry for help, the suction of the grain carried her down into the darkness, faster and faster, through the long tube of the loading spout till she was shot down into the hold of the Harry Yates.

Fortunately for Nellie, Alex. Tennant, of the grain trimming gang, was close to the spout and saw her emerge from it, and fly down into the hold. A quick plunge and he had her in his arms and carried her tenderly to the deck, where, to the astonishment of all, she shook herself to straighten out her rumpled hair, and walked away with her boss, unharmed by the perilous trip.

Nellie is a little fox terrier owned by A. H. Harvey, of 119 Ford street.

DOMINION MILLERS' ASSOCIATION HOLD ANNUAL MEETING AND ELECT OFFICERS

At the recent annual meeting in Toronto of the Dominion Millers' Association the following officers were re-elected for the year 1922-23: President, Mr. R. A. Thompson, Lynden; vice-president, Mr. J. G. Wolverton; secretary-treasurer, C. B. Watts; executive committee, Messrs. J. W. Meyers, Peterborough; Walter J. Snider, St. Jacobs'; James Cullen, Woodstock; M. A. Halliday, Chesley; S. Fisher, Barrie; C. R. Hunt, London, and T. L. Wood, Ingersoll.

The meeting, which took the form of a banquet, was addressed by Hon. T. A. Low, federal minister without portfolio, a summary of whose remarks will be found on page 16 of this issue of "Canadian Milling & Grain Journal."

CONGESTION AT LOWER LAKES PORTS

Fort William.—The blockade of the lower lakes ports with grain has produced a situation here which is unique for this season of the year. Export demand which has to be filled has rendered it necessary for grain to be loaded on cars here and sent all rail to Montreal instead of being shipped by water either direct to Montreal or through the Georgian Bay ports. The Canadian National Railways have contracted for the shipment of 200,000 bushels of wheat all rail, which is now being loaded.

The Modern Sophocles

WHAT an influence upon life is the home. You may teach your young men and your young women all the learning that their minds can hold and yet shrink and shrivel up the heart within. But if to the learning that may be acquired at the universities, you add the influence of character, of faith and moderation—the influence of the home, you add the greatest treasure of life, a treasure far greater than intellect, the endowment of scientific knowledge and the appreciation of art, far greater than business success. It is treasure that cannot be measured and yet its force may mould character from generation to generation.

RAIL OFFICIALS AT LAKES HEAD EXERT GREAT EFFORTS TO KEEP GRAIN MOVING

Fort William.—Officials of the three railroads running to the head of the lakes are bending every effort to assure fast delivery of grain and at the same time shippers are straining to keep the steady stream of grain moving from the terminal elevators to eastern ports.

Forty-five train crews are being used by the Canadian Pacific Railway running out of Fort William to handle the rush whereas under ordinary conditions not more than fifteen are required. Receipts over the C. P. R. are between twenty and twenty-four trains every twenty-four hours. In one day recently, nearly fourteen hundred and fifty cars were delivered into the local yards of the company, over twelve hundred and fifty of them being loaded with grain.

The Canadian Government Railway has fifty-five crews working between Fort William and Winnipeg, and ten trains are arriving here with grain every twenty-four hours. Under ordinary conditions, not more than twenty crews are used in the same territory.

Fifty per cent. more grain is being handled over the lines of the Canadian National Railways now than at the same time last year. Twenty-one train crews are running out of Port Arthur west now, compared to sixteen at the same time in 1921. Under ordinary conditions but six crews are required. Over ten train-loads of grain are being received in Port Arthur daily.

Congestion in the East

Steamships have been clearing from the twin ports in a steady stream since early in September carrying grain to lower lake ports. Considerable anxiety has been caused to shippers owing to the congestion in the lower lake receiving ports occasioned by the inability of railways to move the grain to the seaboard as fast as the lake steamers are bringing it in. In consequence, new export business is difficult and chartering of lake tonnage almost impossible. Chartering of vessels for winter storage cargoes has been so brisk that rates which at first were four and a half cents have advanced to seven cents, and in a few cases even higher.

Western Provinces

WINNIPEG

WINNIPEG NOVEMBER 1ST. 1922

THE WINNIPEG MARKETS

Flour.—Western millers are at present finding an excellent demand for flour, both at home and from abroad, and the large mills continue to operate to capacity and are finding a ready market for all grades. Domestic trade is particularly good and orders being received from Eastern Canada, presumably for export trade to Europe, are keeping up wonderfully well, it is stated, and altogether the situation is very cheering. Business with the United States has fallen off considerably during the past two weeks, but this is not due to the tariff duty as demand and enquiry is very active, but is the direct result of the transportation situation and the inability of American railroads to supply cars for this business. Canadian railroads are being taxed severely at the present time in handling the Western grain crop, which they are doing most efficiently west of the Great Lakes, but they refuse to allow their cars to cross the International boundary owing to the extreme difficulty experienced in having them returned to Canada.

With the loss of the American trade at present, a few of the smaller mills are suffering as they were finding an outlet there for their surplus flour. This has brought about increasing stocks and a disposition in some cases to quote very close prices.

There is a steady demand from the Orient for Western Canada spring wheat flour, and millers report they are finding a good market there for their first and second "clears."

The market has been very steady during the past two weeks and prices are unchanged from last report. Present quotations are as follows: For delivery at points between Fort William and the Saskatchewan boundary, top patent springs are quoted at $6.30 bbl., jute, seconds at $5.70, and first clears at $5, mixed cars, 30-day terms; cotton, 10c over this basis. Saskatchewan and Alberta points are 10c under Manitoba, and Pacific Coast points 30c to 50c over. Bakers and other car-lot buyers get special prices.

Millfeed.—There is an excellent demand for bran and shorts throughout the west, and a strong enquiry is coming from American points. The car shortage in the United States is greatly restricting this business, however, but there is no doubt that if this situation was different American brokers would almost take the output of Western mills. Bran is selling at $17 per ton, in mixed cars with flour, and shorts at $19, in bags, delivered, Winnipeg territory.

Oatmeal.—Trade in rolled oats and oatmeal continues quiet with the market steady, with only a fair volume being worked at unchanged prices. Good brands of rolled oats are quoted at $2.50, in 80-lb. cotton bags, and oatmeal $3.05, in 98-lb. cotton bags, delivered Winnipeg territory.

THE GRAIN MARKET

In spite of exceptionally heavy receipts which have broken all previous records, the wheat market has stood up well and actually shows a gain in prices since last report.

Buying by exporters, shippers and others has been on a large scale, and the market here has witnessed a broad, active trade from day to day. The relative cheapness of Canadian wheat is attracting all the European business to this market, and exporters report almost daily that a large business had been worked over night.

The grain situation during the past two weeks has been largely dominated by the congestion at Bay ports, and if it had not been for the extreme difficulty of getting wheat to seaboard the volume of new business would undoubtedly have been much larger. The situation has been so serious that the export trade have been giving little attention to new business but devoting all activity to getting their grain already en route to seaboard. Many shippers and exporters have been hard hit financially, in as much that they have been forced to pay fancy premiums for wheat that was actually at seaboard to take care of ocean tonnage engaged and already waiting to load. Very heavy demurrage charges have also had to be met when boats have been delayed for days from unloading at Bay ports.

THE 1922 WHEAT CROP

A string of 257,250 cars would be needed to carry Canada's wheat crop this year. If these cars were placed end to end, they would make a train 1,946 miles long, or one extending from Montreal to a point 26 miles west of Swift Current, Sask., to say nothing of the locomotives. Allowing 35 cars to a locomotive it would require 7,250 to haul 257,750 cars, and 7,350 trains running at intervals of five minutes apart would take 252 days to pass a given point. The addition of 7,350 locomotives (average length 81 feet 9½ inches) to the 257,250 cars, would make the total length of cars and locomotives combined 2,060 miles, or almost the distance from Montreal to Medicine Hat.

Coarse Grains.—While all other cash coarse grains have been going through the Clearing House in large volume, the demand for oats has been just keen enough to keep this cereal fractionally above the future price. The demand has been for all rail shipment and with gradually increasing receipts there is no doubt that more business could be worked if transportation facilities were available.

There was, for sometime, a considerable amount of business being worked in cash barley, exporters being the principal buyers, but the demand fell off and large amounts went through the Clearing House during the past week or so. Canadian crushers have backed away from the flax market, after a period of odd-car trading, and are waiting for the October future to expire so as they can buy basis November price. The low grades of rye have been in fair demand and a moderate trade has been going on, but the high grades have not been in demand, large quantities going through the Clearing House.

Montreal.—A report from France states that Aristide Briand, seven times premier of France, secured the first prize for wheat at a Normandy exhibition with a crop grown on his farm from wheat imported from Canada.

DUST EXPLOSION HAZARDS IN FEED GRINDING ESTABLISHMENTS

That the dust explosion hazard in feed-grinding mills is not to be passed over lightly was brought out by Mr. H. R. Brown of the Bureau of Chemistry, U.S. Department of Agriculture, in the course of an address before the members of the American Feed Manufacturers' Association at their recent 14th annual convention at Chicago. Mr. Brown reminded the members that although much progress had been made in recent years in safeguarding their mills, in the last 20 years in 30 of the more important feed-mill explosions 60 lives were lost, 118 persons injured, and property damaged to the extent of almost $5,000,000. Flour millers, he said, had made much more progress than the feed millers and have proved the effectiveness of many precautionary measures.

Of the 30 explosions just referred to, 18 are reported to have been caused by sparks in the grinders. The use of open flames in dusty atmospheres, unprotected electric lamps, and static electricity were some of the other causes mentioned by Mr. Brown, but he predicted that the elimination of foreign material from feed entering the grinders will prove to be the most effective method of dust explosion control in these mills. Feed millers have a handicap to overcome in solving this problem because they use much salvaged grain which frequently contains a large amount of foreign material, whereas flour millers use only grain that has been well cleaned.

In this talk a number of suggestions were made regarding special methods that might be employed, among them the possible use of inert gas for the prevention of explosions in grinding installations. The general recommendations for all industries, however, should be adopted by every feed manufacturer. Cleanliness is the first and most effective precaution as there can be no explosion where there is little dust in the air. Other important precautions are the elimination of open flames, sparks of static electricity, and protection of lamps and other electric equipment. Explosions do not occur without some sort of spark to set them off.

Mr. Brown suggested that if feed manufacturers would continue to co-operate in the explosion prevention work there would be little reason to fear such disastrous explosions in feed mills as have occurred in the past.

COMPLAIN REGARDING MIXED GRADES

London.—The president of the Corn Trade Association, with other interested parties, accompanied by Secretary Griffith, of the Canadian High Commissioner's office, interviewed the United States Consul-General, Mr. Robert P. Skinner, here recently regarding the mixture in Canadian spring wheat which, it is stated, takes place while the wheat is en route from Canada through the United States to Great Britain.

The Corn Trade Association's president stated that the United States export association admitted that Canadian wheat, which had been submitted for examination showed evidences of having been mixed with other grades. This applied to cargoes which had come through Philadelphia and Baltimore, it was stated, but those cargoes which had come via New York offered no cause for complaint.

Another speaker said that he had received cargoes of wheat which had proved to have been mixed with other grades up to 20 per cent.

Consul-General Skinner promised to have the matter investigated.

VANCOUVER GRAIN SHIPMENTS HEAVY

Vancouver. — Shipments since September of Western Canadian wheat to the United Kingdom through the port of Vancouver total 615,851 bushels to date, and 5,324,914 bushels have been booked for shipment to the end of February, according to figures made public here recently. To the Orient 367,000 bushels have been booked for November and December shipment. For Japan 267,000 bushels are on order, and for China 100,000 bushels.

Vancouver.—It is generally conceded by grain men here that Vancouver will experience its greatest grain handling year in the history of the port. Col. R. G. Parkhurst, chairman of the grain shipping committee, stated recently that ninety thousand tons of wheat will be shipped through this port during the next four months. A further 15,000 tons had been contracted for later shipment. While the United Kingdom has been an extensive buyer, the Orient has taken the majority of the shipments. Two years ago shipments of grain from this port to the Orient were practically negligible.

THE WESTERN MARKETS

The following report furnished by Messrs. Baird and Botterell, 103 Grain Exchange, Winnipeg, shows daily highest price levels from Oct. 12, 1922, to Oct. 26, 1922, inclusive.

	Oct. 12	Oct. 13	Oct. 14	Oct. 16	Oct. 17	Oct. 18	Oct. 19	Oct. 20	Oct. 21	Oct. 23	Oct. 24	Oct. 25	Oct. 26
November Wheat	0.99⅞	1.00	1.01¾	1.03	1.03⅝	1.04	1.03	1.01¾	1.01⅞	1.01⅛	1.02¼	1.02⅞	1.05
December Wheat	0.97⅜	0.97	0.98½	0.99⅝	0.98¾	0.98⅞	0.97¾	0.98	0.98¼	0.97⅝	0.98	0.98	0.99½
May Wheat	1.01¾	1.01½	1.02½	1.03½	1.02⅞	1.02⅞	0.01⅞	1.02½	1.02¾	1.02⅜	1.02¾	1.02⅝	1.03⅞
November Flax	1.97½	1.97¼	2.00¼	2.03	2.08	2.10½	2.10	2.09⅛	2.08¼	2.08⅝	2.12⅛	2.16	2.18
December Flax	1.90¾	1.90	1.93¾	1.96¼	2.00	1.99¾	1.98	1.96	1.96	1.95¾	1.99½	2.03	2.07½
May Flax	1.95	1.94	1.98	1.99	2.02½	2.02¾	2.00¾	1.99¾	1.99¾	1.99	2.01	2.03	2.03½
December Rye	0.67⅜	0.67⅝	0.70¼	0.71¾	0.75	0.73½	0.71¾	0.74	0.70½	0.70⅜	0.70½	0.71	0.72⅛
May Rye	0.70	0.71	0.72⅝	0.76⅝	0.72⅝	0.77⅜	0.76⅛	0.75	0.74¾	0.73⅝	0.75	0.75	0.76¼
December Barley	0.52⅛	0.52¼	0.52⅝	0.52⅞	0.53¼	0.53	0.52⅝	0.51⅞	0.52	0.51¾	0.52	0.52⅛	0.51⅞
May Barley	0.54½	0.54¾	0.54⅞	0.54⅞	0.57	0.56¾	0.56¾	0.55⅜	0.55	0.55⅛	0.55½	0.56	0.56
November Oats	0.40½	0.41¼	0.41½	0.41⅜	0.41	0.41	0.40¼	0.40⅝	0.40⅞	0.40¾	0.41	0.41⅜	0.42¼
December Oats	0.39¼	0.39⅝	0.40¼	0.40½	0.39⅞	0.40⅛	0.39¼	0.39⅛	0.39½	0.39	0.39⅜	0.39½	0.39⅞
May Oats	0.42⅜	0.42⅝	0.43½	0.43⅞	0.43¼	0.43½	0.42⅝	0.42¾	0.42¾	0.42¾	0.42⅞	0.42¾	0.43⅛

Foreign Flour and Grain News

IT is a fact of which Canadian mills may justly be proud that despite the many difficulties, tariff and otherwise with which they are beset, their export business continues to flourish. So excellent indeed has been the demand for spring wheat grades during the past two weeks that the surplus output of several of the mills has been disposed of up to the end of December, while sales are even reported for January shipment. Most of the large western mills are operating to capacity. An especially satisfactory feature of the situation is the steady increase being recorded in flour shipments to the United Kingdom.

As an illustration of the excellent progress being made in the exportation of spring wheat grades it will be sufficient to state that during the month ending September 30 last, shipments of flour from the Dominion totalled 697,379 barrels as against 360,959 barrels for September, 1921. Of the September, 1922, shipments nearly one-half, or 314,100 barrels, went to the United Kingdom, 53,108 to the United States and 330,171 to other countries.

There is every reason to anticipate that October figures will make an even better showing.

A recent increase of 10 cents per barrel for carlots, and 20 cents per barrel for broken lots of winter wheat flour, has not had any apparent effect on the large volume of business being done in this commodity.

With regard to the grain export situation authorities seem to generally agree that the wheat supply in Europe is greatly diminished, and that increased exports will be the result, with steady buying throughout the year. The rye crops on the other side are slightly better than wheat, but a large amount of rye will also be required by the importing countries of Europe; several of the heavy consumers of rye, notably Germany, Sweden and Belgium, have shown material losses in rye production, and much of the Canadian and United States rye surplus will probably go to these countries.

Financial conditions may restrict imports to some extent in a number of the European countries, but it is generally believed that necessary purchases will not be greatly reduced.

INDIA HAS BUMPER 1922 CROP.

Ottawa.—India has a bumper wheat crop. H. A. Chisholm, Canadian Trade Commissioner in Calcutta, has advised the Department of Trade and Commerce that India's current year's crop, most of which was harvested in March and April, yielded 9,813,000 long tons, or more than 350,000,000 bushels, or no less than 46 per cent. greater than last year's crop of 6,706,000 tons, while the total area is reported as 28,234,000 acres, as compared with 25,783,000 acres last year.

MONTH'S TRAFFIC CREATED RECORD

Montreal.—A new high record in grain carrying was established by the Lachine Canal in September. From the first to the thirtieth inclusive, over fourteen million bushels of all varieties, representing an increase of more than four and a half million bushels over the total for September, 1921, were shipped down the canal for trans-shipment.

WORLD'S WHEAT CROPS LESS THIS YEAR

Washington. — The world's wheat production this year will be less than it was last year but considerably greater than the pre-war average. Actual estimates and condition reports from reporting countries indicate a yield this year of 3,019,526,000 bushels, compared with the production last year of 3,059,596,000 and the 1909-1913 average of 2,890,353,000 bushels.

Reports from all sources regarding Russia said crop conditions were favorable and would feed the nation this year, eliminating the need of imported wheat. Nearly all European countries, however, reported decreases, the total European production being estimated at 1,100,991,000 compared with 1,239,256,000 in 1921 and the pre-war average of 1,275,157,000. British India and Japan are expected to produce 392,874,000 bushels compared with 282,094,000 last year and the pre-war average of 375,827,000.

THE CHICAGO MARKETS

The following table compiled from figures furnished by Messrs. Logan & Bryan, members of the Winnipeg Grain Exchange and the Chicago Board of Trade, C.P.R. Telegraph Chambers, Montreal, show highest price levels recorded on Chicago Board of Trade from Oct. 12, 1922, to Oct. 26, 1922, inclusive.

Columbus Day—Board of Trade Closed.

	Oct. 12	Oct. 13	Oct. 14	Oct. 16	Oct. 17	Oct. 18	Oct. 19	Oct. 20	Oct. 21	Oct. 23	Oct. 24	Oct. 25	Oct. 26
December Wheat		1.09 7/8	1.12 1/8	1.14	1.15 1/2	1.16 1/2	1.14 1/2	1.13 5/8	1.12 5/8	1.11 5/8	1.12	1.11 7/8	1.13 1/8
May Wheat		1.11	1.12 3/4	1.14	1.13 7/8	1.14 1/4	1.13 5/8	1.13 3/8	1.12 3/4	1.12 1/8	1.12 1/8	1.11 7/8	1.12 3/4
July Wheat		1.03 7/8	1.04 5/8	1.06 1/4	1.06	1.06 3/4	1.05 5/8	1.05 3/8	1.05 3/8	1.04 5/8	1.04 1/4	1.04 3/8	1.05 1/2
December Corn		0.64 1/4	0.66 1/4	0.66 7/8	0.68 7/8	0.69 1/2	0.68 3/8	0.68 3/8	0.67 7/8	0.66 7/8	0.67 1/8	0.66	0.67 3/8
May Corn		0.66 1/8	0.67 3/4	0.68 1/4	0.69 5/8	0.70 1/4	0.68 3/8	0.69	0.68 1/2	0.67 7/8	0.67 7/8	0.66 3/4	0.67 1/2
July Corn		0.66	0.67 3/8	0.68 1/8	0.69 3/4	0.70 1/4	0.68 3/4	0.69	0.68 1/2	0.67 3/4	0.67 3/4	0.66 5/8	0.67 1/4
December Oats		0.40 3/4	0.42 5/8	0.42 7/8	0.43 1/8	0.43 1/4	0.42 1/2	0.42 1/2	0.42	0.41 3/8	0.41 1/2	0.41	0.41 1/2
May Oats		0.41	0.42 5/8	0.43	0.43 1/8	0.43 3/8	0.42 3/4	0.42 3/4	0.42 5/8	0.42 1/4	0.42	0.41 1/2	0.41 3/4
July Oats		0.39 5/8	0.40	0.40 1/2	0.40 1/8	0.40 1/2	0.39 7/8	0.40	0.39 7/8	0.39 7/8	0.39 1/2	0.39 1/8	0.39 1/4
December Barley		0.64	0.65	0.65 1/2	0.66	0.66 1/2	0.66 1/2	0.66 1/2	0.66 1/2	0.66	0.66	0.65	0.64 7/8
December Rye		0.75 7/8	0.78 3/4	0.80 1/8	0.81 3/8	0.82	0.82 1/2	0.80 1/4	0.79 1/8	0.78 1/2	0.78 7/8	0.78 1/2	0.79 3/4
May Rye		0.76 3/4	0.79 3/8	0.81 1/4	0.81 1/2	0.82 1/8	0.80 3/4	0.80 3/4	0.79 5/8	0.79 3/8	0.79 7/8	0.79 1/2	0.80 1/2

The Elevator Operator

SAYS RAILWAYS ARE NOT TOO MANY WHEN HUGE CROP MOVEMENT IS CONSIDERED

Fort William.—Because grain is being moved from the West to this port at a rate unprecedented in trade, history is not to be taken as indication that prairie stocks will be tucked away before the year end.

"The harvest will not be carried out of the country before the next crop is upon us," said Mr. Norman M. Paterson, the well-known local grain man recently. "There is so much of it—more than we can calculate for the moment—that all the high class equipment and organization we can command will be inadequate to get it to the world markets this year or next."

It was stressed that up to the end of September all grains brought down here totalled only 19 million bushels. October will, of course, show larger receipts at the lakehead, and the rush will continue heavy until navigation closes. Then the movement will slow down, due to the limitations even on the enormous accommodation here, to the fact that the bulk freight water transportation will cease, and to the impediments placed on hauling throughout the winter months. Now then, say grain men, consider that the wheat crop alone will probably be close to 400 million bushels, and add coarser grains, and see the job ahead. And it will get worse—or is it better?—every year.

"There has been some talk about too many railways in Canada," said Mr. Paterson; "but, under the circumstances of the grain movement, I don't think so, in the West anyway. We will need more. Remember, there are only 217,000 farmers producing this big prairie crop of ours, and using only ten per cent. of the arable land out west! Wait until this figure is merely doubled, and ponder over the problem we will have!"

No Jealousy Towards Vancouver

For this reason he, in common with other grain elevator men here, is heartily in accord with the proposition of having part of the Alberta crop cleaned at Calgary for shipment to the west coast, where facilities are not so highly developed as at these ports. It is quite a sensible move. Moreover, there is not the slightest feeling here against the development of a greater grain handling station at Vancouver.

"We need another outlet," observed Mr. Paterson, "if there is to be that rapid handling and marketing so necessary to the sale of our western products. We cannot expect to take care of all that the West will ultimately grow. Vancouver and other west coast ports must be brought into service. We must think nationally."

Of course, as a matter of geography and topography Fort William and Port Arthur will always remain the principal clearing house, forwarding and storage agents.

Leader, Sask.—Two elevators, three grain cars and 2,000 bushels of grain were destroyed by fire here recently. The loss is estimated at $22,000, partly covered by some insurance on the elevators.

GRAIN BLOCKADE SENDING SHIPMENTS TO EUROPE VIA MEXICAN GULF PORTS

Fort William.—The grain situation at the head of the Lakes remains virtually unchanged. Receipts from the West have been coming down with surprising steadiness, never dropping below two million bushels, nor rising above two and a half million. While two million bushels went East by water on one day recently, the average shipments have not been up to that figure, so that the grain is gradually backing up.

The crux of the situation is east of here. The blockade is such that a cargo has even been consigned to South Chicago to be shipped abroad via some Gulf of Mexico ports. The situation has caused lake rates to fluctuate to an extent unknown before.

From three to eight cents from Fort William to the bay ports, and from 15 to 21 cents to Montreal from Buffalo, and from eight to twelve and a half cents for winter vessel storage, such valuation shows the demoralization of the grain carrying trade. The railways have done admirable work in bringing down their grain from the West to Fort William, but have been swamped by the tide of grain from the bay ports east. Three thousand cars are on order for transporting grain all rail from the head of the Lakes to the Seaboard.

ONE EFFECT OF CAPPER-TINCHER LAW

Chicago.—That hedging and trading in wheat futures was being driven from Chicago to Winnipeg and Liverpool by the Capper-Tincher law was the testimony of Mr. John R. Mauff, secretary of the Board of Trade, before the federal trade commission here recently. The hearing was on domestic grain trade methods.

If the new law were to be upheld by the Supreme Court, Mr. Mauff added, buyers of cash grain who raised the "hedge" to protect themselves would be forced to go to a British market to deal in futures.

SAYS SAMPLE MARKET WELL RECEIVED

Fort William.—Mr. Frank Spence, president of the Fort William sample market and produce exchange, received word recently from Mr. J. P. Kenny, who is now in Chicago, to the effect that he is meeting with signal success in interesting American buyers to take advantage of the facilities offered by the new company for trading on sample in Fort William, and he expects that some of the strongest grain firms of the United States will become interested and that they will be ready almost immediately to do business in Fort William. With the co-operation of such firms as these, Mr. Spence is convinced that the exchange will start under very favorable circumstances and that, even if it commences a little late to reach full activity this season, it will prove a very vital factor in the grain trade next year. However, there will be no delay in getting it under way on Mr. Kenny's return, and the business done in this season's crop may be a surprise even to those who are most optimistic.

The Elevator Operator

GREATER ELEVATOR CAPACITY FOR VANCOUVER TO GET CONSIDERATION

Vancouver.—Expressing his belief that prairie people would turn more and more to Vancouver as a seaport, instead of hauling their goods the greater distance to the Atlantic seaboard, Hon. J. A. Robb, Minister of Trade and Commerce, addressing a meeting of the Vancouver Centre Liberal Association here while en route to Australia, promised that Vancouver would receive every consideration of its great desire for greater elevator capacity. The Federal Government, he said, was getting well into harness, had a grip on the financial situation, was in a fair way to effect a few economies in administration, and Mr. Robb thought it would be able to keep pace in the matter of public works with the increasing business of the Dominion.

COUNTRY ELEVATOR TARIFF CHARGES

Fort William. — The Board of Grain Commissioners recently announced the tariff of maximum charges for licensed country elevators, effective October 1, 1922, for the period ending August 31, 1923, as follows:

Subject to the capacity of the elevator and the nature of the construction, all grain tendered must be taken into store upon the following terms and conditions, and under the provisions of the Canada Grain Act, 1912, and the amendments thereto.

Special Grain Bin.—Receiving, elevating, spouting, insurance against fire, storing for the first fifteen days, and putting into cars on track; no elevator shall charge more than two and one-half cents (2½c) per bushel for wheat, barley, flax and rye, and one and three-quarters of a cent (1¾c) per bushel for oats.

Graded Storage and Subject to Grade and Dockage Grain—Receiving, elevating, spouting, insurance against fire, storing for the first fifteen days, and putting into cars on track; no elevator shall charge more than one and three-quarters cents (1¾c) per bushel.

Storage, not otherwise provided, including insurance against fire, for each succeeding day after the first fifteen (15) days shall not exceed one-thirtieth of one cent (1/30c) per bushel.

Grain specially cleaned will be subject to a charge of one-half cent (½c) per bushel for each cleaning.

PARTIAL EMBARGO ON GRAIN

Calgary.—A partial embargo on Vancouver grain, similar to that now in effect on shipments to points east of Fort William and Port Arthur, was put into effect recently by the railway companies. All grain going forward must be under permit. The new arrangement is to stop the tie up which existed last season, when some of the cars remained on the tracks for several months before being unloaded into government elevators. Shipments to the coast are being greatly facilitated by a large proportion of wheat being cleaned at the government elevators in Calgary. Local grain men do not anticipate that the volume of business to the coast will be curtailed by embargo.

GRAIN STORAGE RATES UP

Winnipeg, Man.—A good demand has developed at the seaport for Canadian wheat. Little tonnage is available, while enormous inspections are going on in Winnipeg.

Shippers recently reported a rate of 5½c to Buffalo and all Georgian ports while winter storage has gone up to 6c at Buffalo first half of November; last half of November and first five days of December 7c. Last year at this date winter storage boats were offering at 4½c and the highest rate paid at end of November to close of navigation was 5¾c.

A Striking Example of Concrete Work in Mill Construction

Plant of the Peerless Cereal Mills, Limited, at Woodstock, Ont.

Fort William.—Believed to have been caused by a dust explosion, a small elevator owned by the Bole Grain Company collapsed recently. An adjoining building was partially wrecked by several thousand bushels of wheat breaking through the roof. The elevator, which was built in 1912, had a total capacity of about 8,000 bushels. No estimate of the loss is available, but if good weather prevails it will be small, as most of the grain can be salved.

Elevator, Mill & Personal Notes

The Fegles Construction Company, which has its headquarters at Minneapolis, Minn., and its Canadian office at Fort William, Ont., have been awarded the contract for the new million dollar mill, which is to be built by the Pillsbury Flour Mills Company, at Buffalo, N.Y. The Fegles Construction Company have done considerable mill and elevator construction work in Canada, one of their latest undertakings being the new Paterson elevator at Fort William, Ont., a photograph of which appeared on page 25, of "Canadian Milling & Grain Journal", issue of October 15th, 1922. Particulars of the new Paterson mill appeared on page 24 of our issue of August 15, last.

Messrs. Smith Bros., Clifford, Ont., have installed a 50-h.p. Vickers-Petter Crude Oil Engine.

Lucan, Ont.—The plant of the Crown Milling Company, Ltd., was damaged by fire recently, to the extent of $30,000.

Benard, Man.—A 50-barrel roller mill is to be erected here by the Hutterian Brotherhood.

Winnipeg, Man.—Echo Flour Mills Company, Ltd., have suspended operations.

Winkler, Man.—The Winkler Milling Company, Ltd., resumed operations recently, following a period of idleness.

Toronto.—The Interprovincial Flour Mills Company, Ltd., have been authorized to increase their capital from $500,000 to $1,500,000.

Portage la Prairie, Man.—The oatmeal plant of the Metcalfe Milling Co., Ltd., which was destroyed by fire last summer, is to be rebuilt.

Provost, Alta.—Messrs. D. Krause and James Bradley have purchased and assumed control of the Provost Flour Mills, which were previously operated by Mr. J. Martens. The new owners will, it is understood, engage in custom grinding.

Winnipeg.—During the six weeks period ending October 14, the Canadian Pacific Railway marketed approximately 85,000,000 bushels of grain on their western lines.

Milestone, Sask.—The Canadian Elevator Company's house here has been taken over by the Crescent Elevator Co., Ltd., Winnipeg, incorporated recently with capitalization of $100,000. Mr. J. S. Blair, of Weyburn, Sask., and who has been in charge of the Milestone territory for the Crescent company handled the transfer. Mr. Ben M. Spencer, formerly of Corinne, Sask., has been appointed manager.

The Lambton Co-Operative Milling Company, Limited, has been organized with head office at Oil Springs, Ont., to carry on business as growers of grain, millers and allied activities. The provisional directors are Messrs. J. H. Penfold, G. W. Shortt, Thomas Simpson, G. A. Annett, Charles Morley, Edward Graham, Archibald McMurchy and P. H. Sanderson.

Toronto.—The Dodds Canadian Iron Works, Limited, Welland, Ont., are now developing their lines of flour and mining machinery and expect to place them on the market in the near future. These include a small self-contained flour mill and machines and appliances for the prevention of dust explosions in mines, factories and elevators. Mr. R. T. F. Dodds is the president of the company.

Mr. H. S. Van Scoyoc, advertising manager of the Canada Cement Company, Limited, Montreal, was elected president of the Association of Canadian Advertisers at the recent annual convention of that organization in Toronto.

Messrs. Hogg & Lytle, dealers in fancy peas, seeds and grains, 1809 Royal Bank Building, Toronto, Ont., recently completed the erection of a 40,000 bushel elevator at De Winton, Alta.

Mr. N. J. Breen, western general manager of the Lake of the Woods Milling Co., Ltd., Winnipeg, returned from a trip of inspection to Medicine Hat recently.

Ed. Jones, for some time past the manager of the Inspection Bureau of the North West Grain Dealers' Association, has recently been appointed general manager of the Association.

Hon. James Wilson, pioneer resident of Saskatoon, Sask., and connected with the grain and milling business for many years, is now associated with Messrs. J. H. Spiers Co., Saskatoon and Moose Jaw, wholesale grain and seed dealers. They purpose specializing in high grade milling wheat for shipping to eastern millers.

Major H. R. Poussette, director of the commercial intelligence service of the Department of Trade and Commerce, Ottawa, retuprned from England recently.

Mr. Will Hill, who is well known to the milling and grain trade, and who is now representing the Huntley Manufacturing Co., Ltd., Tillsonburg, Ont., in western Canada, returned to Winnipeg recently after a trip through his territory. Mr. Hill states that most of the mills he visited are operating at capacity on one of the highest grade crops yet recorded.

Messrs. Charles & McRostin is the name of a new grain and flour company which has opened for business at 802 C. P. R. Building, Toronto. Mr. Charles, who is the senior member of the firm, was formerly with the Caldwell Flour and Feed Company, of Dundas, Ont., and Mr. J. E. McRostin was manager of the flour and feed department of the U. F. O. in Toronto, for two years. Both partners are widely known in Ontario milling and grain circles.

Mr. Andrew Law, of Messrs. Crawford & Law, the well-known grain importers of Glasgow, Scotland, and formerly head of the National Flour Importers' Association of Great Britain, has arrived in Canada, and is expected to visit Montreal, Toronto and western points shortly.

Mr. Norman McAllister, manager of the Glenavon (Sask.) Milling Company, Ltd., was fatally injured in an automobile accident at Glenavon recently. Deceased was well known to the Toronto trade.

Mr. Charles R. Hunt, of Hunt Bros., millers, London, Ont., was a recent visitor in Montreal.

Winnipeg.—Mr. F. W. Robinson, traveling inspector of the Gillespie Elevator Co., a resident of Edmonton, Alta., was killed by a passing train on a crossing at Heisler, Alta., recently.

The Curse of Consigning—An American Viewpoint

An editorial reply to the following article appears on page 13 of this issue of "Canadian Milling & Grain Journal."

"Canadian millers are ruining both the present and the future of their export flour trade by resorting to a practice which, nearly forty years ago, was thoroughly tried out by the exporting millers of the United States and abandoned as suicidal by all save a very few perversely wrong-minded exporters. These, not having the intelligence to foresee its inevitable result, persevered in an obviously wrong course until finally, their last resource for avoiding failure having been exhausted, their creditors, to stop further loss, intervened and forced them out of business, to the relief of their more enlightened competitors," says The Northwestern Miller, in a recent issue.

This iniquitous practice is that of consigning flour to the United Kingdom, than which no more certain method of losing money in milling exists. It is strange that men of business, having before them, as an open book, the experience of the past as a guide to safe procedure, should recurrently resort to methods which have been notoriously productive of ruinous results. Many years ago, when merchant milling was in its initial stage of development, the consignment habit was the outstanding evil of the trade.

Protested against by every meeting of millers, its logical results were exposed so clearly that there was no gainsaying them. It is not on record that any miller ever defended the practice or contended that it was sound or safe. Even the confirmed victim of the consignment habit could offer no defence of his obsession; he simply consigned, stupidly, blindly and without reason, except that he knew no way of better merchandising.

Looking for Miracles

Consigning is a process of putting off until tomorrow the losses of to-day; of evasion in the hope of a trade miracle happening which will turn loss into profit; of piling up for a future time of reckoning, certain to arrive, the mistakes of the present. It is living in a fool's paradise, until the final returns are in, and then dodging their calamitous effects by more consigning, animated by renewed false hopes, doomed to disappointment.

The habit, once contracted, is like an insidious disease which gradually permeates the entire system, until in time a complete collapse comes. It is of exactly the same nature as kiting checks, and it always becomes the last desperate resort of the miller who has reached the end of his financial rope.

If millers who practice this dangerous method of getting rid of their flour are able to stand the inevitable ultimate loss because of their strong financial condition, it is, of course, their own affair, so far as the risk is concerned, but this does not relieve them from moral responsibility for undermining the basis of the foreign market, and gradually making legitimate c.i.f. business impossible.

In the case of other millers, not so fortunately situated who may be dependent upon banks for financing consignments, "The Northwestern Miller" suggests that their bankers who are furnishing the money to carry on such unsound transactions, scrutinize carefully the nature of their foreign sales. Consigning flour is not selling it, by any means; it is merely shipping it into a market where by the very nature of the case a sacrifice of value is certain to follow.

In these days bankers do not loan the money belonging to their depositors perfunctorily. They have a right, and it is their sacred duty to inquire carefully into the fundamental soundness of the transactions which they furnish the funds to finance. By withholding credit when such transactions are inherently wrong, they exert a strong influence toward the perpetuation of right business methods. This is not only their privilege, but their duty, and every good banker realizes it.

Consigning Flour Indefensible

Consigning flour to the United Kingdom, however plausibly it may be presented to the banker, is actually indefensible. It represents no legitimate sale whatever. It is merely getting the flour away from the mill on the pretence of selling it, with all the chances of a successful outcome in the final accounting more absolutely, completely and thoroughly eliminated than if the shipper hazarded an amount more than equal to his legitimate margin in a crooked gambling game. The cards are all stacked in advance, the dice are loaded and the wheel of chance is inevitably fixed against the consignor.

How this works is shown in the following communication, written to "The Northwestern Miller" by a British flour importer:—

"In all the trade newspapers, and as prominently in "The Northwestern Miller" as anywhere else, statements have frequently appeared that consignments of spring wheat flour from Canada are depressing prices, but to what extent this business has been carried, and the disastrous results to the legitimate flour business which have followed, can only be partially realized on your side of the Atlantic, although it is only too well known on this side.

"It is perfectly obvious that the Canadian business will soon be entirely a consignment business, unless this reckless method is stopped. Three large concerns in Canada are the principal practitioners. They must surely have made too much money out of their sales in this country during the war, and, conscience stricken, are determined to present it back again to the people. Bakers and factors understand this game perfectly well. They wait until the agents for the mills, who have the stuff on the wharf, are presented with the alternative of either sending it to store at heavy expense, or giving it to them at what they choose to pay for it. The mill's agents, having their commission secured, cannot be expected to hold out for the full price, or work very hard to get it.

"An agent selling flour which he has bought will fight for the last shilling, but the same agent will not work hard for the last shilling per sack

when his own interest may be the fiftieth part of that shilling. He will merely accept any ghost story about the price of somebody else's flour that is told him by the buyer, and give this to the original shipper as a reason for his accepting the low price.

"Our reason for writing this now is that we have a case in our own Canadian mail to-day. We knew that another importer had sold a lot of Manitoba flour to one of our customers at a price below anything we could have taken for a flour of the same grade, which, unfortunately, we ourselves owned. We wrote to our Canadian correspondents, and merely asked them to inquire of the miller who shipped it how he was getting on with his consignments, to which we have a reply that our letter arrived at the same time that they had an inquiry from this particular miller as to why they were selling flour so cheap here, because their agent had written to them that he had to accept the low price he took to meet our competition. That is an authentic instance in our own experience, and there must be many such.

"It really comes to this, that if this consignment business goes on, all c.i.f. buyers will be driven out of the field, because nobody can afford to bring on unsold flour here to be shot to pieces by trading of this kind."

INSPECTING 1,700 CARS DAILY

Winnipeg—The crop movement continues with unabated energy at the average rate of about 1,700 cars per day through the inspection staff at Winnipeg. This represents approximately two million bushels of grain daily passing through the hands of the inspectors. Of this total the Canadian Pacific has been handling about sixty per cent., and the

View showing interior arrangement of one of the C. P. R. hopper bottom cars, over 85,000 of which are being used in this year's crop movement.

Canadian National about forty per cent. This is due in part to the fact that the crop all along the southern portion of Saskatchewan and Alberta was heavier than farther north, and as the Canadian Pacific lines are farther south they got the lion's share. And, as usual, the C.P.R. was ready and able for the opportunity.

GRAIN BOOKED AT VANCOUVER

Vancouver.—Indications that grain shipments through the port of Vancouver this year will exceed all previous records are contained in the announcement of the Merchants' Exchange that more than

Illustrating exterior arrangement of one of the Canadian Pacific Railway hopper bottom cars.

sixteen thousand tons of grain have already been booked for the United Kingdom. Total grain shipments last year were 7,500,000 bushels, a record.

Legal Notes

Winnipeg.—"The Department of Justice at Ottawa is taking immediate steps to make application to the Privy Council for leave to appeal the judgment of the Manitoba Court of Appeal, making it ultra vires to make any grain company doing business in the province take out a license under the Canada Grain Act," stated Mr. Matthew Snow, of the Board of Grain Commissioners here recently. Mr. Snow made this announcement in commenting upon the decision of the Supreme Court of Canada in refusing an application of the board for leave to appeal against the Manitoba court's judgment. He said:

"The Supreme Court held that as the case involved a quasi criminal matter as well as the question of the vvalidity of an Act of Parliament, they had no jurisdiction to grant the leave to appeal. The question of whether a grain commission merchant can be compelled to take out a license will have to be determined by the Privy Council. The Supreme Court has made no pronouncement upon the merits of the question or the validity of the Grain Act."

Steps Taken at Ottawa

Ottawa.—A high official of the Justice Department confirmed the above dispatch that steps were being taken to apply to the Privy Council for leave to appeal the judgment of the Manitoba Court declaring it ultra vires to compel grain companies operating in Manitoba to take out a license under the Canada Grain Act.

THE PRACTICAL MILLER

IS STATIC ELECTRICITY DANGEROUS IN FLOUR MILLS AND GRAIN ELEVATORS?

Ed. Note.—The first instalment of this interesting article, written by Mr. George H. Rice, Inspector-Engineer for the Hartford Fire Insurance Company, for the American Miller, and which is herewith concluded, appeared on page 24 of "Canadian Milling & Grain Journal," issue of October 15.

If a static spark from a rapidly moving belt or machine can explode a mixture of gas and air or a mixture of gasoline and air, and if a mixture of finely divided dust and air is similar in so many respects to the gaseous mixtures just mentioned before, is it not reasonable to believe that were this same static spark introduced into this mixture of finely divided dust suspended in air, it would produce a like explosion? Many explosions have no doubt been produced this way but how are we to prove this? How are we to differentiate between explosions from static electricity or from other causes? At the present we have no way to tell—we know that static electricity will produce an explosion of dust and air—knowing this to be a fact —why not then guard against this ever present hazard in mills and elevators?

Here is what Mr. Price of the U. S. Bureau of Chemistry wrote in the "Literary Digest" when he was interviewed shortly after the Armour Elevator Explosion at South Chicago. "A dust-explosion behaves very much like a gas-explosion. It requires a certain mixture of dust and air, together with an external source of ignition, just the same as the mixture of gas and air. Just as gas and air must be intimately mixed and in proper proportions, in the cylinder of an internal combustion engine, so these dusts must be in suspension in the air as a cloud, intimately mixed with air, and in certain proportions. Neither the mixture of gas and air nor that of dust and air will explode until it comes in contact with a flame or some other source of heat sufficient to cause it to ignite.

Explosions Easily Propagated

"It has been determined that an explosion will propagate in an atmosphere containing from 0.023 to 0.032 ounces of coal dust per cubic foot of air. Since experimental work has shown that the grain-dusts are even more inflammable than coal-dust, it may be inferred that a less quantity of grain-dust is required per cubic foot than of coal-dust."

When a comb is run through the hair on a dry day, especially if it is a rubber comb, and the hair is perfectly dry, each individual hair seems to stand up alone and refuse to go smoothly into place. This is due to static electricity—due to the friction of the comb. One might be inclined to assume that dry, very dry, atmosphere is essential to the production of these electrical charges. This is not so! As a matter of fact, however, the electricity is generated just the same no matter whether the air is dry or moist. Moist air is one of the so-called conductors of electricity, so that when the weather is damp the charges usually are led off as fast as they are formed or generated. Dry air does not act as a conductor of electricity but permits the charges generated to accumulate in the charged body until contact with some less highly electrified body causes it to discharge or become dissipated by equalizing its potential.

We all have experienced these little static phenomena sometimes—oftentimes wondering just what the cause — seldom realizing just what disaster might result — if this phenomenon were introduced continually into a dusty or gaseous atmosphere, such as is ever present in mills and elevators. The operating principle of the gas or gasoline engine is simply the introducing of an electrical spark at the proper time into a gaseous mixture under pressure. The result is an explosion. This explosion or combustion of gas produces great pressure and heat which is mechanically harnessed so as to transfer itself into the production of mechanical energy. If this sample explosion or combustion of gas were to occur outside of this provided container — commonly known as a cylinder — instead of transferring heat energy for the use of mankind it would become a destructive power manifesting itself in blown-out walls, up-heaved foundations, total destruction and loss of property.

Static Electricity in Humid Periods

It has been the experience of nearly every grain or mill operator during periods of low humidity and drought to find that static electricity is present on nearly all the metallic parts of the several machines, shafts and pulleys. Frequently the employees about the plant discover it from time to time in the various parts of the plant. The oiler finds that his can gets a shock as he brings it near the bearing in the process of oiling. Still another employee finds that when he passes beneath the belt operating some rapidly moving lineshaft or piece of machinery his hair rises and upon approaching more closely he experiences a prickly sensation. Often times a blue haze between the pulley and the belt at the point where the belt leaves the pulley and again sparks are seen to fly from moving parts of machines to near-by railings, water-pipes and radiators.

Herein lies a great danger! An extremely dangerous condition is ever present when this phenomenon is allowed to exist. The presence of this "blue-haze" or "snappy blue spark" emanating from the several machines and belts—in the ever-present dusty atmosphere of the mills and elevators—offers the greatest possibility of a dust explosion and fire loss. This phenomenon offers a hazard not less dangerous than the open flame or the electric spark from the open type of brush motors. It is possible for a static electricity spark to readily ignite the finely divided dust ever in suspension in the atmosphere, thus producing an explosion which in turn often times causes total loss not only by destruction but often by fire that follows. Frequently it takes its toll of human life.

Those familiar with the destruction wrought by these dust explosions and fire losses know that the losses are generally total. Every effort should be made to prevent, as far as possible, any more explosions from occuring in mills and elevators. The remedy is within our very hands. Why not then apply it?

$5 for a Letter

If the Canadian flour milling and grain handling industries are to mark progress in keeping with their importance it is essential that there should be greater co-operation between them and that the one should help the other in such a manner that by so doing they may help themselves.

There has been in the past, and there is still considerable antagonism between those who make flour and those who handle the basic commodity for the manufacturing thereof, and while it is in no sense to be regarded as a desire to fill space or as a matter of financial profit "Canadian Milling & Grain Journal," with the sole object of endeavoring to stimulate greater interest in the problems of flour milling and grain handling among practical millers, grain elevator operators, mill and elevator engineers, contractors, and transportation and grain exchange men who have to do with the handling of flour and wheat, will pay $5.00 for each accepted article concerning the manufacture of flour, the handling and the marketing of wheat, erection of flour mills and grain elevators, etc., with suggestions for possible improvement in any of the methods now being practised.

If You Are a Practical Miller:--

and have invented any "wrinkles" or ideas of your own for saving time or money in the operation of your mill, and in the manufacture of flour or feeding-stuffs;

or have any suggestions to make regarding improved methods of laying out machinery in flour mills, large or small;

or have discovered any new methods of cleaning or tempering wheat, or

If You Are a Grain Elevator Operator:--

and have any ideas regarding the better handling of grain, its loading into elevators or its discharging into grain boats;

or have any ideas regarding the better building or equipping of elevators,

Send Them In--

Articles dealing with the above or other similar subjects should be not more than 500 words in length and should be written on one side of the paper only.

Names of those whose articles are accepted for publication will not be printed unless desired.

Do not be afraid to send in your ideas or suggestions written in your own way. We will put them into shape for you without in any way altering what you want to say.

If you can send us a rough sketch of your idea all the better.

Address your contributions, or correspondence regarding any further particulars you may need as to above offer to

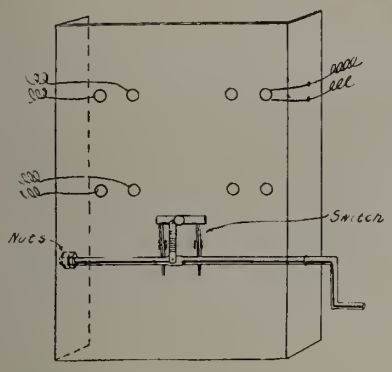
The Editor,

"CANADIAN MILLING & GRAIN JOURNAL,"
Dubrule Building,
Phillips Square, Montreal.

THE PRACTICAL MILLER

SAFETY SWITCH DEVICE

A safe and convenient manner of turning a switch in a fuse box on and off is provided by a crank, as shown in the accompanying sketch. The crank is slipped through holes made in the sides of the box and on one end lock nuts are placed to hold the crank in place.



A small hole is drilled through a flattened piece of the crank in order that there may be fitted at right angles to the latter a small strip of metal which is fastened at the other end to the cross-piece upon which the knob of the switch is mounted. By turning the crank handle the switch is opened or closed as desired.

DEFECTIVE GRAINS IN MILLING WHEAT

Actual milling and baking tests with samples of wheat containing frozen, green and other abnormal kernels, justify the objections of millers to mixtures containing such grain in any appreciable amounts and warrant the grading down of such wheat.

With frosted wheat, results have not agreed for the reason that the quality of frosted wheat varies greatly. Sometimes only the bran seems affected by a light frost, and in such cases, the flour seems quite normal. But the tendency of frosted wheat in a mixture is to reduce the loaf volume and give the bread a greyish appearance. When the amount of frosted grains is large in a sample, the color may be decidedly dark although the loaf volume may not suffer proportionately. From 10 to 15 per cent. of frozen grains will affect color and bread volume quite perceptibly. A percentage above that gives very unsatisfactory results. Frozen grains do not seem to affect the absorption qualities of the flour.

On the other hand, green grains in the wheat appear to increase the absorption of the flour, but the effect on the flour of such grains is worse than that of frosted wheat. As little as 5 per cent. of green grains will decrease the loaf volume and give a dark color. From 10 to 15 per cent. of green grains in the mixture is disastrous both to loaf volume and color, giving a heavy, dark loaf.

Bleached grains in spring wheat, if not counterbalanced by frosted or green kernels, seem to have a rather beneficial effect on the flour and bread. Spotted grains seem to give the flour a yellowish cast but are not otherwise objectionable.

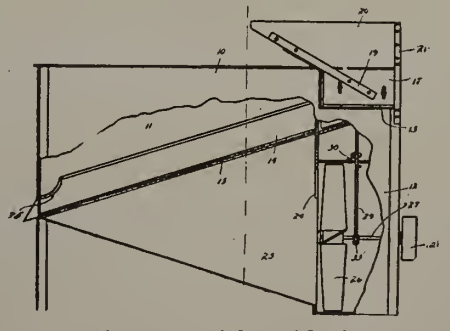
PROTEIN CONTENT IN FLOUR

A matter which is interesting, if not exciting, the milling trade in the United States at the present time is the question of the protein content of the flour. Some millers, it appears, give some sort of guarantee as to the protein content of their flour, while some bakers are now demanding it. This, of course, is entirely a chemist's matter to decide, but it appears to have been discovered and settled that the quality and food value of the protein varies as greatly as the quantities do in the different samples of wheat, and that whatever guarantees are given must for that reason be unreliable. Moreover, it is said, and almost conclusively proved, that the protein content is not a guarantee of food value, as it is the quality rather than the quantity that counts. This subject might be a legitimate one for discussion. Whether or not the actual protein content represents the food value of the wheat, it can scarcely be denied that strong red glutenous wheat must produce a stronger flour, and of higher food value than weak white wheat. The one represents the lean and the other the fat of meat, and we do not associate body building and stamina with fat. All glutenous wheats, however, as they appear to have discovered in the United States, are not strong, and, indeed some gluten is actually weak, and it is wheats of this description that cause the trouble and uncertainty to millers, and that is the chief reason why they should be properly tested.—(The Miller, London, Eng.)

Milling and Grain Patents

Mr. William T. Merzenich, Minneapolis, Minn., one of the leading flour manufacturing centres in the United States, is the inventor of the grain separator, which is described in his claim as follows:

A pneumatic grain cleaner having in combination a casing, an inclined trough-like runway extended through said casing and provided with a perforate bottom, said casing forming an air chamber above said trough, and air chambers having imperforate walls extending downwardly at each side of



said trough continuous with said air chamber, a fan having a casing with an air intake port in communication with said latter air chambers, the outlet of said fan casing being directed outside of said casing into the atmosphere, whereby the lighter material fed into said runway is carried upwardly out of the same and downwardly at each side of fan casing.

THE PRACTICAL MILLER

THE TEMPERING OF SOFT WHEAT*

THE subject of soft wheat milling is being discussed very much in the milling journals of the present time. However, the paper that I am to read to you will treat only as to my experience as a soft wheat miller.

Too much stress cannot be placed on selecting good milling wheat. If the wheat you mill is not good milling wheat, then the flour you make will not be good flour regardless of the milling equipment that you have. To bring soft wheat up to a high standard of milling, it is very necessary that the wheat be not only graded as to quality and test, but also as to moisture. Too much stress cannot be placed on wheat when coming into elevator or mill.

Importance of Even Tempering.

While all wheat is graded as to quality and grade I believe that we should be more cautious in our grading of extreme moisture of wheat one way or the other. It has been my experience that you cannot mill wheat that is made up of a blend of wheat that varies in moisture of two to four per cent and left in a bin for a certain length of time to equalize the moisture. I understand that this is the practice of quite a number of millers. It takes a long time to equalize a moisture so as to place it in a good milling condition. You may temper this blend for thirty-six hours or longer, and may treat otherwise ahead of the rolls and you will not have an even moistured wheat for some of the wheat berries will be high in moisture while others will be low. I do not know if this would be a serious hindrance in the milling of hard wheat. However, I do know that milling soft wheat with uneven tempering interferes seriously with your color and ash. You will realize that it takes a great deal of equipment to handle and grade wheat as I will outline. However, it pays big in the end, saves the miller a lot of trouble and gives him better and more uniform flour as to color and ash.

As to hours of temper: that depends on the moisture the wheat already has. Weather conditions and physical surroundings will also have an important part in the condition of wheat. Temper from thirty-six to seventy-two hours and sometimes longer, depending on moisture and the time of tempering. My experience is that the drier the wheat, the longer time is required to give a certain percentage all the way through the wheat berries.

Moisture test should be made at the time of tempering to determine the amount of moisture the wheat already has, and add sufficient amount of moisture to bring it up to the required moisture for milling, allowing a certain percentage of the moisture added for evaporation. This evaporation will be more in wood bins than in metal. The wheat should be weighed to wetting conveyor by automatic scales or other contrivances, so as to know the exact number of bushels per minute or hour that you are drawing. Then you will know just how much water to add to get the desired moisture.

Use of Different Bins.

Temper your two or three kinds of wheat into different bins. Blend from these bins for the grind, and with this way of tempering and blending you obtain a uniform moisture through all the wheat berries, grinding nice and mellow on your break rolls, producing an abundance of middlings free from unnecessary residue that might occur in unevenly tempered wheat. This will surely obtain the largest quantity of middlings possible and the minimum of break flour, owing to the fact that we can purify the one, and make high class patent. Would recommend that scouring be done after tempering, it being understood that the wheat is well cleaned by elevator separator before tempering.

Some years ago it was the practice among soft wheat millers to do all the scouring before tempering, it being the supposition the crease dirt could not be removed after tempering. However, experience has taught us that such is not the case. We find that better results can be obtained after tempering, because the grain during the tempering period has become plump and smooth, and the bran very tough, giving the scourer a better chance to thoroughly scour and polish the wheat and to remove all beeswing and the wheat beard. The crease dirt will be removed much easier on the tempered wheat by reason of the long time temper, the germ taking on moisture causing the wheat berries to swell, which in turn has a tendency to release the crease dirt.

How to Scour.

Good scouring removes as little as possible of the bran, and as much as possible of the fiber, beard and stem, then scour it in such a way that the wheat berries will be left in a smooth polished state and the bran surface not scratched. Experience has taught us with the kind of equipment we have that we should not take off any of the bran, but leave it intact and polished smooth. This gives you a firm basis for your break rolls and a better chance to make a cleaner and broader bran. It being well understood among millers that the broader and cleaner bran you can make, the cleaner will be your mill products.

Therefore, it must be said you must properly temper and scour your wheat if you expect to do high class milling. Some millers consider the tempering of the wheat of minor importance, but experience has taught me differently. There is scarcely a time when the condition of wheat cannot be improved by tempering, and when I use the word "temper" I really mean temper.

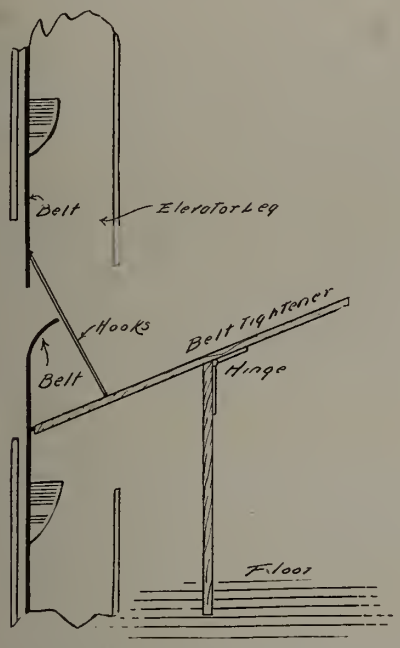
I consider that it takes more intelligence and skill to temper wheat correctly than it does to clean it properly. To temper wheat successfully, the miller must know that the same degree of tempering will not suit any two varieties or moistures of wheat. Neither will the same time and degree of tempering suit the same variety of wheat any two days in succession: that is, the wheat that is to be tempered. At times the tempering process is very delicate, requiring constant watchfulness and great skill.

* Summary of paper read by Mr. Jas. J. Scheurer, at the recent annual convention of the Association of Operative Millers at Kansas City, Mo.

THE PRACTICAL MILLER

TIGHTENING ELEVATOR BELTS

Of the many devices used for tightening elevator belts that shown is one of the simplest. The sketch shows an elevator leg with the front and back lid off for taking up the belt. The tightener has a



hinged fulcrum and the end of the lever that catches the belt has two spikes which are stuck into the belt. The hook catches the upper half of the belt, and by exerting pressure on the lever the belt is tightened.

THE BRAZILIAN FLOUR TRADE

The following interesting particulars regarding Brazil's flour trade would appear to emphasize the possibility of Canadian flour exporters getting into this valuable market.

At the present time the United States and Argentina are competitors for this trade. The United States is favored with preferential import duty, amounting to 30 per cent. reduction from the usual tariff. It is reported that Northern Brazil is the only part of the country whose trade can be supplied on a competitive basis at any time. There is a great variation in the volume of flour imported from the two competing countries. In 1905 the United States importations dwindled to 20,000 tons, against 108,577 tons from Argentina. Then United States trade made steady gains with corresponding decreases in imports from Argentina. In 1913, 1914, 1915 and 1916 U. S. flour exports to Brazil exceeded those from Argentina. Then by a shift of trade, due to the war, the U. S. lost their trade entirely in 1918, and Argentina shipped to Brazil 172,543 tons of flour.

Now it appears Brazil is reducing flour imports and in 1921 imported only 65,607 tons, against 216,-334 tons in 1919. Since the war the United States and Argentina have been dividing the trade.

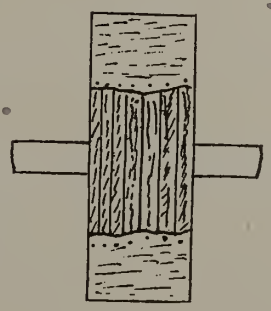
THE DISINFECTION OF FLOUR

Some time ago it was suggested in Germany that hydrocyanic acid gas could be used for disinfecting flours from wheat and other cereals. Evidently the fact that the use of the gas in fumigating for insects does not injure either wheat or flour, led to this suggestion of its use for conditioning or sterilizing flour. But two French scientists who have been investigating the subject, advise that the use of hydrocyanic acid gas for such a purpose be prohibited until further experimental work has been done, and unqualified evidence of its harmlessness been secured. Evidently the French scientists see the possibility of danger from the deadly gas, if flour is to be subjected to an atmosphere impregnated with it under conditions where every particle would be exposed to its action, as in a falling stream, which would be different from being exposed to the gas in mass.

REPAIRING A BROKEN PULLEY

Having need at once of a pulley which had been broken a practical miller saved himself considerable loss of time by replacing the metal pulley with one of wood. Common soft lumber was used and was sawed at the same circle as the pulley rim. Each piece was fastened to the rim of the pulley with wood screws and securely screwed together. A wood spoke was put in place of the iron spoke which was broken out. This spoke simply rested against the hub and was fastened to the wood fillers.

When the job was completed the pulley was placed on a shaft and dressed to a true face con-



forming to the rest of the pulley. True, this is but a make-shift, but at that it came in well and saved a shut-down at a time when a shut-down would have been decidedly unwelcome. The time required to do this work depends on the facilities at hand, and the speed of the man who does it.

The small miller, located away from the shop and supply house, must resort to makeshift very often. But when he has got by and is in position to replace the makeshift it is well to put in standard repairs, or the time will come when his mill will be decidedly "home made."

THE PRACTICAL MILLER

CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

WANTED MILL MACHINERY.—Advertiser can use small reel, about 30" x 48", also bran duster. Reply Box 127, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE.—Dust collectors. One No. 14 Perfection and one Cyclone style No. 6. Brand new. At exceptionally low prices. Also, few second-hand grinding mills, at bargain prices. Reply, International Agency, Room 416, St. Nicholas Building, Montreal, P.Q.

POSITION WANTED by miller with over thirty years experience in mills as miller, head miller and manager. Understands the buying and selling part of the business. Can furnish proofs of ability as to obtaining yield and quality. References. Reply Box 128, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED.—Ex-miller with long experience wishes to rent 25-40 barrel mill. Reply Box 125, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—One 50-barrel Midget Marvel Mill, with Cleaner, Elevator, Heads and Boots, Belt and Buckets, Transmission. Guaranteed good condition. Reply Box 126, "Canadian Milling & Grain Journal", Phillips Place Building, Phillips Square, Montreal, P.Q.

WANTED—Position as Head Miller. Applicant has had twenty-five years' experience operating mills from 50 to 400 barrels capacity. Can furnish first class references. Reply, Advertiser, 222 Wychwood Avenue, Toronto, Ont.

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SEVENTY-FIVE barrel roller mill, modern machinery, separate elevator capacity 20,000 bushels. Flour warehouse, 60 tons capacity. Equipped with Chopper, Corn Sheller, and Oat Crusher. Electric Power. Reply Box 121, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED immediately. Flour salesman for Eastern and Western Ontario. Will give liberal terms to right man, who must be able to secure quantity distribution with good record. Reply direct to the James Goldie Company, Ltd., Guelph, Ont.

FOR SALE — Flour mill machinery. Practical enough to fully equip small mill. All modern and in good shape. Attractive price. Reply Box 116-6, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

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THE PRACTICAL MILLER

The Question Box

With a view to making this department one of real service, "Canadian Milling & Grain Journal" cordially invites its readers to send in their problems to The Question Box. There are but very few millers or elevator operators who do not have worries in the proper conduct of their plants. It may be due to lack of experience or inability to trace cause and effect. The logical and sensible thing to do is to ask someone who may possibly know. Often he is not at hand, and still oftener the perplexed miller or elevator operator does not want to show his lack of knowledge. Under these circumstances he can address his inquiry to the craft through this journal. His name will not be divulged if he wishes to remain incognito. Someone is sure to reply who has had similar problems to meet or similar questions to ask. We guarantee to devote all the space necessary to the asking and answering of questions, so do not be backward in sending them in.

THE EDITOR.

QUESTION.—What do the abbreviations F.A.Q. and C.I.F. mean?

ANSWER. — F.A.Q. — fair average quality — means that the quality of a particular shipment shall equal the average of all shipments of that article made from a specific country, or port or ports in that country, within a specific period.

C.I.F.—The interpretation of this term is "cost, freight and insurance." Under this condition the seller contracts to sell an article at a certain price which shall include the cost, the freight and the insurance. In general practice, where the seller tenders a bill of lading, the amount of the freight is deducted from the seller's invoice, and the buyer, when he takes delivery of his goods at the vessel's rail, pays the freight to the shipbroker or agent. When the seller tenders a delivery order he himself has paid the freight, and the buyer pays the invoice amount to the seller in full.

The seller's responsibility does not cease upon the parcel being loaded, as even when the documents have been taken up and paid for by the buyer there is still the question, in the majority of cases, of outturn, quality, etc.

The letters "c.i.f." do not mean "certificate inspection final," as some generally imagine.

The meaning of the term "certificate inspection final as to quality" is that some agreed authority shall certify that the quality of the goods shipped is in accordance with that contracted for, and, provided the seller is able to produce such a certificate, the buyer has no claim upon him for inferiority of quality.

There are several departments in this issue of "Canadian Milling & Grain Journal" which are specially interesting. After you have read them all, consider carefully whether you are not better off with the twenty-four numbers of the Journal on your desk, than with the $3 required for a full year's subscription in your pocket.

The Duster

Several Canadian cigar manufacturers have already, it is said, started making cigar boxes out of Canadian poplar. This, however, is nothing like the economy which some cigar makers practice when they make their cigars out of Canadian cabbage.—(Exchange.)

"The London literary lights tried to make fun of Sinclair Lewis' American accent, but he retorted with the Harrison story.

"Harrison, you know, was waylaid one day by a chap who said:

" 'Ow is your 'ealth, 'Arrison?'

" 'My name is not 'Arrison,' said Harrison gruffly.

" 'Well,' growled the other fellow, 'if a haitch, a hay, two hars, a hi, a hess, a ho and a hen, don't spell 'Arrison, what the 'ell do they spell?' "

A green monkey, with a pink tail and brown eyebrows, has been acquired by the Washington zoo. The facts leads Punch to remark that the visitors to the United States capital can now enjoy some of the sensations which were common before the passing of the eighteenth amendment.

Rufus Redd Dogg

"B' th' great Flamingo spit," exclaimed Rufus Redd Dogg, as he threw a file of railway tariff amendments on wheat and wheat products at the cat as she was making for the feed bin, "sum people don't know when they're lucky." Th' other day Hank Bulger, he mus' be on th' wrong side o' forty-five buys sum aigs down t' th' corner grocery an' on wan o' them is wrote: "Will th' finder o' this aig communicate wi' Mis' Ima Yungun, R. R. No. 22, Happy Corners, wi' a view t' formin' an' acquaintance." Well, sir, Hank up an' puts on his Sunday go-t'-meetin' duds an' off he goes t' Happy Corners. He fin's th' house o' Yungun an' a oldish lookin' woman opens th' door. "I'm lookin' for Ima Yungun," sez Hank, sez he, "I hev a aig here wi' her moniker on et. I'd like t' see her."

"Yer lookin' at her," sez th' woman, sez she, laffin'.

"Hank looks her up an' down, an' then he sez, sez he: "Well, whut about the acquaintanceship business on th' aig?"

Th' woman haw-hawed. "Thet's outa th' question, she sez, sez she, thet aig wuz wrote on fourteen year back. I'm marrit now twelve year 'n hev elevin childer wi' no sign o' th' percession stoppin' yet."

Hank cum home wi' a turr'ble load on an' now he swears thet he's offa women an' aigs f'r life. "I never seen my ol' woman's name on no aig," concluded Rufus sorrowfully. "Ef I had wan o' us wud'na bin marrit. She's allus growlin'."

LAKE OF THE WOODS MILLING CO., LIMITED,

MAKERS OF

MANITOBA SPRING WHEAT FLOUR

GUARANTEED

NOT BLEACHED *NOT BLENDED*

MILLS AT KEEWATIN, PORTAGE LA PRAIRIE, MEDICINE HAT

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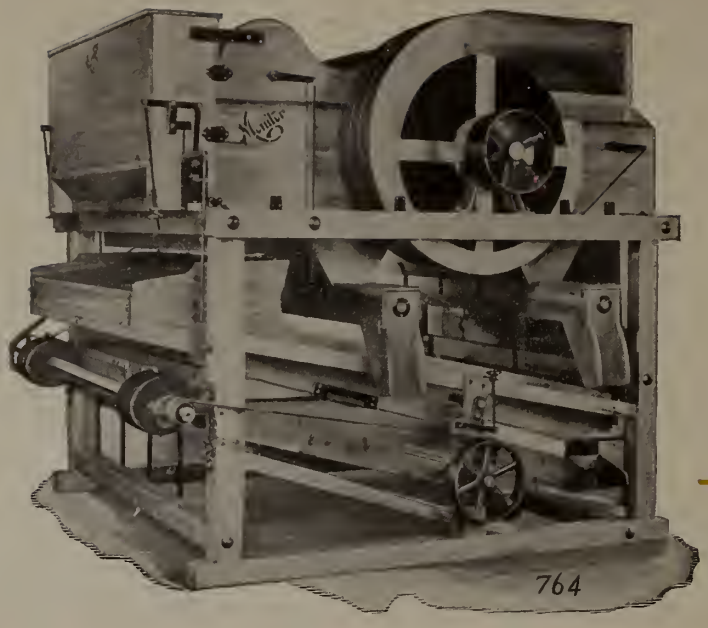

Are You Losing Good Grain?

What is there to be gained by using any cleaner which pulls over good wheat with the screenings? Yet, that is a common fault with some cleaners. They lack power of discrimination but that lack costs you money.

Not so with the MONITOR. Its air separations are easily adjusted so that you get nothing from the conveyor tips but pure screenings but you do get them all. The wheat passing through will grade high.

This is reason enough for making your next cleaner a MONITOR.

The Monitor

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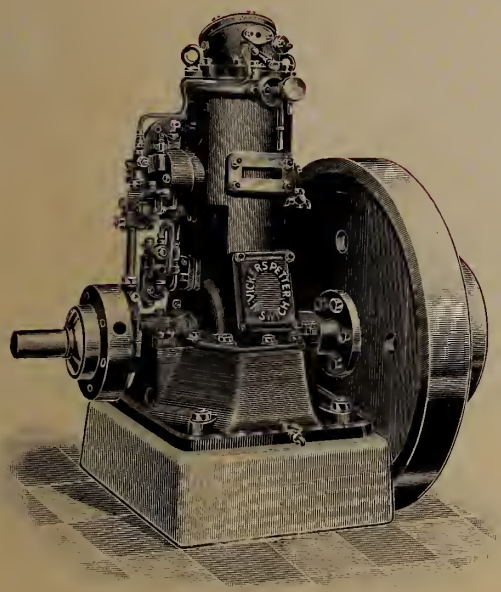
Tillsonburg, Ontario, Canada

Represented by:— MR. WILL HILL, 404 McArthur Building, Winnipeg, Manitoba.

CANADIAN
Milling & Grain
JOURNAL

VOL. III MONTREAL, NOVEMBER 15th, 1922 No. 20

Petterize Your Power Problems



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Starts instantly from cold, and will last a lifetime.

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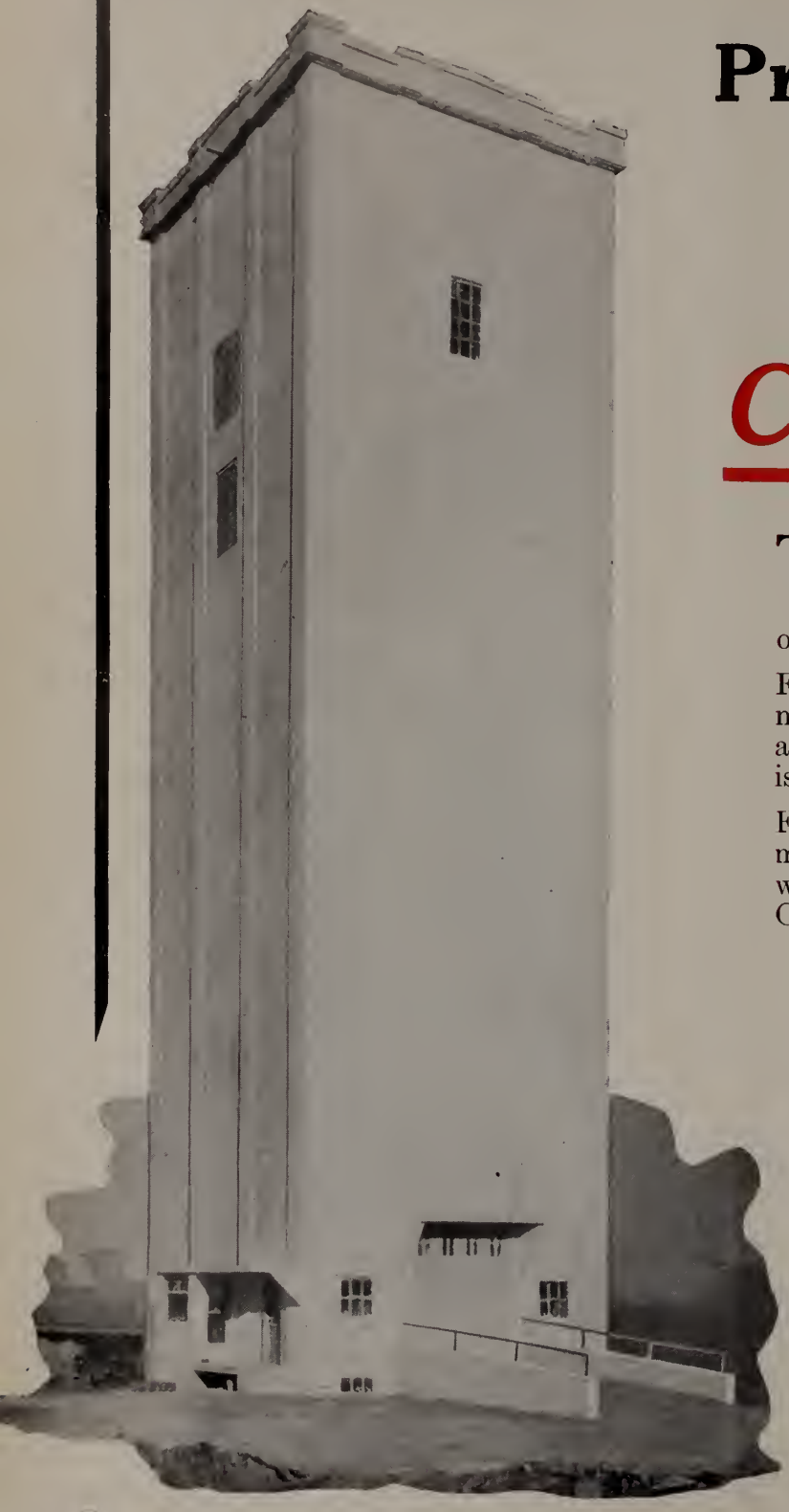
CANADIAN REPRESENTATIVE
225 Beaver Hall Hill Montreal



Preserving the Grain

in

CONCRETE

THE storage structure that will keep Grain at its best, is the cheapest in the end, regardless of its first cost.

For the preservation of Grain there must be protection against fire, rats, and dampness—and this protection is attained by the use of Concrete.

For the line elevator of modest dimensions or the terminal elevator with storage for millions of bushels, Concrete is equally desirable.

Our service Department is anxious to co-operate in all lines of work for which Concrete is adapted. Our library is at your disposal at all times without charge.

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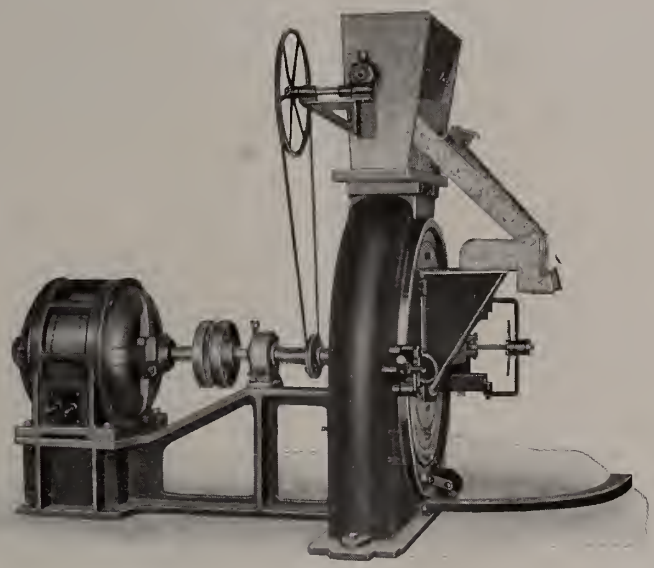
The Simplex Screenings Grinder has proven itself worthy of consideration among the most discriminating millers.



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Will grind all kinds of screenings mixed with oat hulls.

No slivers or hulls left unground.

No adjustment to be made when operating.

Does work and produces results that are not possible to obtain with any other system.

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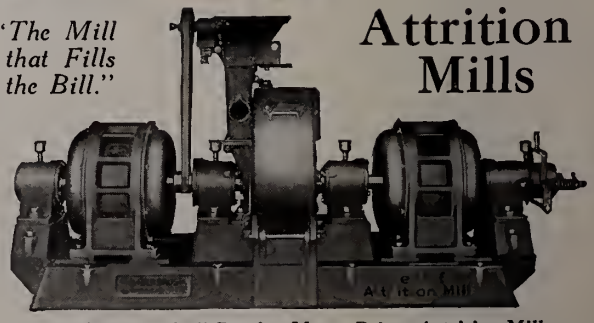

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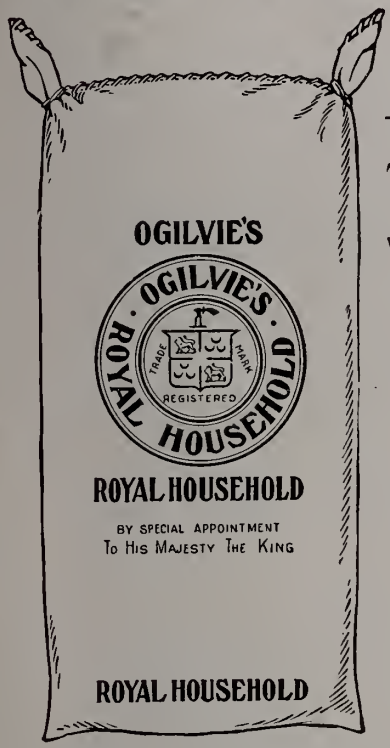

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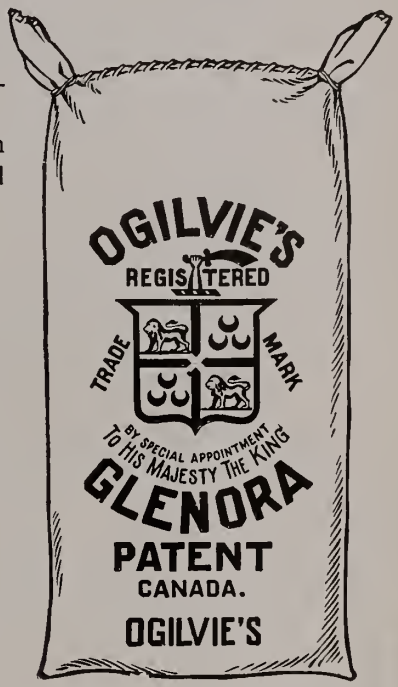

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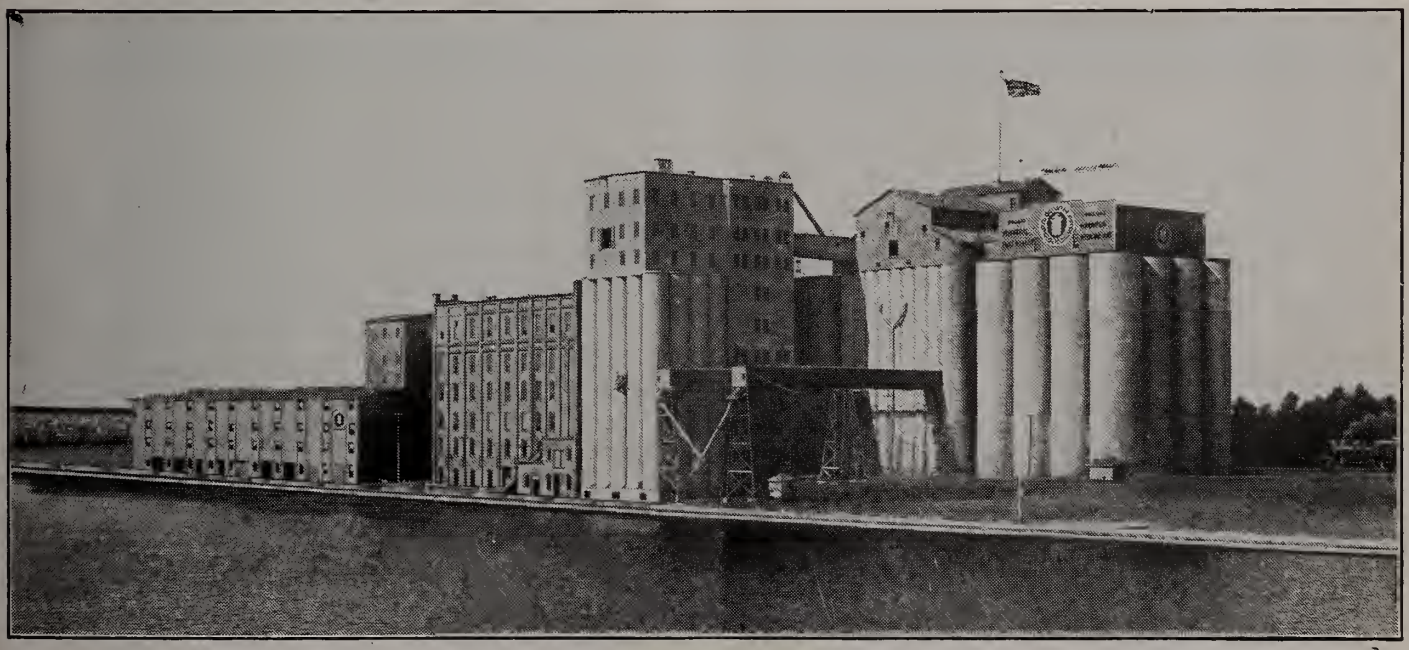

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Daily capacity 10,000 bbls. Flour.
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100 Interior Elevators Throughout Canada's Famous Wheat Belt

The Reason Why!

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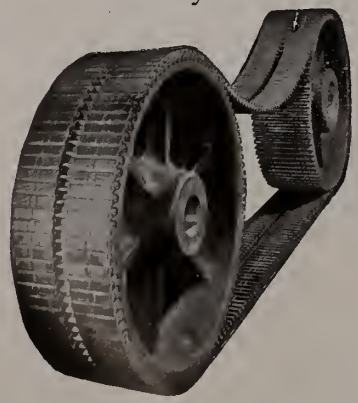

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5,000 BARRELS FLOUR
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A high quality bread flour sold in bags of 7, 14, 24, 49 and 98 lbs. and in barrels of 98 and 196 lbs.

Quotations on car lots requested.

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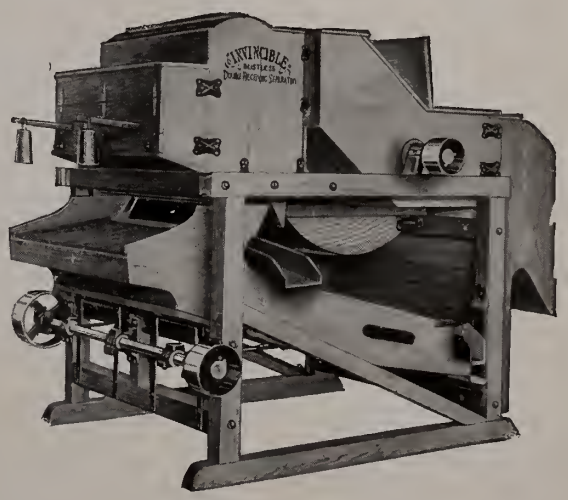

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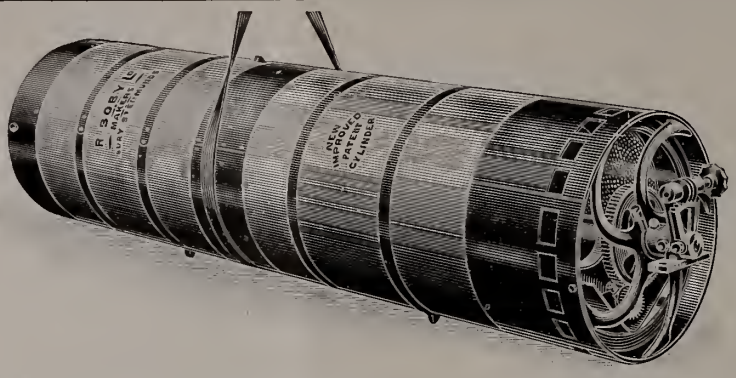

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DOON TWINES

DOON TWINES D MADE IN CANADA

Flour sacks or bags do not break open at the top where DOON TWINES are used

The Standard with Millers for nearly sixty years. Use it and avoid spills and claims.
FLAX SEWING: HEMP SEWING: JUTE SEWING. FOR TIEING FLAX, HEMP OR JUTE

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Greater Adhesion to Pulley, Even Pliability, Great Strength and Remarkable Resistance to Heat, Cold and Moisture

"Greater adhesion" means for you a greater percentage of your costly power delivered to the machines; "even pliability" means smooth, uniform running; "great strength" means freedom from interrupted production for belt adjustments, repairs or replacements; "the remarkable resistance to heat, cold and moisture" means efficiency, even under conditions once considered too harsh for this type of belt.

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VOL. III MONTREAL, NOVEMBER 15TH, 1922. No. 20

CANADA'S ONLY MILLING AND GRAIN PAPER

A Premature Explosion

THE recent decision of the Federal Government with regard to the export rates case, and with which the majority of our readers are no doubt familiar has brought forth, as reported on page 15 of this issue, some strong remarks from Mr. Thomas Robb, secretary and manager of the Shipping Federation of Canada.

Indeed, it would seem like a premature explosion on the part of the well-kown and respected manager of the Shipping Federation since the export rates case in question has absolutely nothing to do with steamship rates either for lake or ocean. Can it be possible that Mr. Robb has found some way to place ocean-going boats on wheels, and is therefore taking an interest in inland rates?

In his comment on the situation Mr. Robb compares ocean rates on wheat shipments from Canadian Atlantic ports with those applying to flour. This is all very interesting, but could Mr. Robb explain how it is that the rate from Montreal for November shipment is 25 cents per 100 pounds as against 15 cents per 100 pounds from New York on American flour? There have been, and are, many rumors in circulation regarding the existence of a combine between Montreal and New York shippers, and it is quite in order to state that unless the situation in regard to these rumors is cleared up its continuation tion will slowly but none the less surely lead to serious results for the Canadian flour export trade.

The Export Rates Case

TO the overwhelming surprise and disappointment of the Canadian milling industry the Government has refused to extend any measure of relief from the present high freight rates on grain to be milled, and on the products which are shipped as flour for export. The Order-in-Council in connection with this matter states that the Minister of Justice upon considering the petition of the Canadian National Millers' Association is of the opinion that this is not a case in which the Governor-in-Council should interfere.

This is a most remarkable decision in view of the fact that certain members of the Cabinet, who, by the way, are not all members of the milling fraternity had previously given the milling industry assurances that they would get some relief from present harsh conditions, and while there is no intention of insinuating that the recent decision is being taken with bad grace, there is not the slightest doubt that it has created among a section of the milling industry an impression that possibly the Government is more interested in politics than in endeavoring to assist the manufacturers of Canada in a cause which is without question one of the most essential to the advancement of any industry, that of being able to place their manufactured products in foreign markets under equal transportation rates and conditions as afforded to the raw products.

A criminal usually knows why he is being jailed. No reason has been given, however, for the adverse decision in the rates case, the last of which we imagine has not been heard.

Drawback Claims on Sacks

A NUMBER of expert millers, it is understood, are experiencing some difficulty in securing payment of their drawback claims on sacks used for export flour shipments.

It appears from investigation that the delays are due to the fact that those claiming payment of drawback claims submit certificates which are not in order.

For their future information millers are advised that if they make use of Form K 15 1-2-A, which is a certificate on importation and sale, and which furnishes the right to exporters to make claim for drawback on materials not imported by them is filed with their claim the payment of same will be greatly facilitated.

Copies of the form in question may be obtained by millers from any office of the Department of Customs or, if they are members thereof, from the Canadian National Millers' Association, Coristine Building, Montreal.

The British and American Debts

IF Europe would agree to a sound program of debt readjustment and the elimination of worthless currencies, both England and her biggest creditor, the United States, could well afford to agree to an indefinite postponement of the huge amounts due each other on account of the loans made to the respective countries during the late war. If such a program were agreed upon and put into operation, trade and commerce would soon revive, and thereby England and America would indirectly recover their principal in this manner much sooner than they will

ever be able to obtain it from debtors who are at present totally unable to pay and who are getting weaker and weaker all the time.

No world stability can be attained, let alone exist, under such conditions as these.

Rumblings in South-Eastern Europe

APPLYING the principle of Biblical prophecy that "He who lives by the sword shall die by the sword," the troubled nations of south-eastern Europe, which were conceived in war, would appear to be threatened with extinction through the same agency.

For the moment, thanks to the stern stand being taken by Britain, the danger of an outbreak seems to have passed, **but war there will be sooner or later,** for, when the settlement of Turkey's difficulty with Greece has been arrived at complications with those other nations, which are included in what a noted diplomat once referred to as "The Cauldron of the Balkans," are bound to arise.

The presence of Turkey in Europe will always be a menace to civilization, and the diplomacy of any settlement arrived at must needs be conducted with a skilful hand in order to arouse as little as possible the in-born racial animosities of the Balkan countries involved. It took but the single shot of an assassin's revolver to start the European debacle of 1914. Therefore, the terms of the settlement with Turkey must be enforced with a hand so firm that the rancor of a few small nations may not again prove the means of plunging the world into war.

More Immigration, Less Taxation

SPEAKING before the Kiwanis Club at Toronto recently Sir Edmund Walker, president of the Canadian Bank of Commerce, characterized super-taxation as being little short of a threat of confiscation against business expansion and urged the need for a selected immigration policy for the Dominion. Incidentally, the eminent banker gave expression to opinions on these subjects which have, on many occasions during the past few months, appeared in the editorial columns of "Canadian Milling & Grain Journal."

In his remarks on taxation generally, and the need for extensive care in its levying, Sir Edmund asserted that super-taxation absorbed the surpluses created in business, and out of which further extensions were made. When, however, these extensions could not be made, the result was depression with its lamentable effects on each individual in the community, and the extensions could not be made if surpluses were swallowed by taxation, he averred.

"We can levy certain taxations which will not hurt any individual materially and will raise what is needed for the war debt. Such taxes still would have graded income taxes that will hurt but will not positively crush, but they will not prevent men with a surplus from investing in industrials, as many now are prevented."

In another part of his address Sir Edmund said that optimism with regard to this country's future would be futile unless taxation was so arranged that it did not unduly bleed the people, thus destroying incentive; or as "Canadian Milling & Grain Journal", in its issue of October 15th averred, "Put a Penalty on Enterprise."

Other Points of View

THEORY AND PRACTICE

Louisville Courier-Journal: The typical human being is a man or woman who declares loudly that the temperature should not be higher than 68 in a house in winter, and who basks happily in 80 degrees when snow is falling outside.

THE HAND OF THE BOLSHEVIK

London Morning Post: We are not among those who laugh at what is thoughtlessly called the Bolshevist bogey. With that dark and sinister power reigning over one-half of the Old World and threatening the other half, we should be unwise to disregard the danger.

DIVORCE REFORM

London Daily News: Lord Buckmaster's plea for a change in the Divorce Law, based on his recent experience in the Divorce Court, is a great human document. It is a worthy step in the cause he is fighting for—an amendment of the law of divorce. That law is not yet a hundred years old, but it carries inconsistencies, and, as Lord Buckmaster's cases suggest, inhumanities, inherited from the clerical courts which previously were the only courts of jurisdiction.

MORE RAILWAY CARS THE SOLUTION

Fort William Times-Journal: The little elevators at the Bay ports are not sufficient size to cope with a big rush of grain, such as occurred this year. The only salvation for them is to have railway cars enough to keep them clear and to make them serve no purpose except that for which they are intended, places for the transfer of grain from boats to cars. The railways are short of cars. The equipment which is in the west is required for the handling of grain to the lake ports, and there seems to be a lack of cars to balance this by furnishing adequate facilities in the east.

THE U. S. RAILWAY SITUATION

American Railroads—There is every reason to expect in 1923 a betterment of railroad operating conditions such as will enable the railroads to meet satisfactorily all traffic demands that are likely to arise.

Certainly there is nothing now in sight to warrant an expectation of the peculiarly adverse conditions that have faced the railroads in 1921 and 1922.

A REBUKE TO "NORMALCY"

New York Evening Post: The election showed a fairly simple purpose. It was a rebuke to the "normalcy" which came dangerously near to degenerating into reaction. The protest was against active reaction as embodied in a vicious tariff in the nation and against the bourbonism in the State that we know locally as Luskism. It was a protest against passive reaction as embodied in a foreign policy of do-nothing at a time when the needs of the world and the interests of the country demanded leadership from the United States.

Eastern Provinces

MONTREAL

Dubrule Building
Phillips Square Tel. Plateau 1983

MONTREAL NOVEMBER 15TH. 1922

THE MONTREAL MARKETS

Flour.—The steady strengthening of the wheat market and the consequent increase of 40 cents per barrel for all grades of spring wheat flour has resulted in a continuation of the excellent demand for supplies. Business, both export and domestic, is highly satisfactory in volume, and barring any sudden break in the wheat market, which is not at present considered likely, should be maintained.

Sales of first patents are being quoted at $6.90, second patents at $6.40, and strong bakers at $6.20 per barrel, in jutes, ex-track, less the usual discount for spot cash.

The demand for winter wheat flour is also active for both local and outside account, and prices are being firmly maintained at the recent 15 cents per barrel increase, car lots of choice grades now being quoted at $5.45 to $5.55 per barrel, in second-hand jute bags, ex-track, and winter wheat patents in smaller quantities at $6.25 per barrel, in new cotton bags, ex-store, with whoice grades quoted at $5.70 to $5.75 per barrel, in second-hand jute bags. White corn flour is strong at $5 to $5.10 per barrel, in jute bags, delivered to the trade.

Grain.—The demand from foreign buyers for grain here has been somewhat limited, but recent cables have been stronger on wheat at an advance of 6d per quarter, with sales of odd loads of No. 1 Northern for November shipment, while the prices being bid for future positions are still out of line with values here. The trade in Canadian western oats and barley is slow. Winnipeg recently reported sales of 500,000 bushels of wheat in that market for export account. New York wires that the export trade in all positions was limited and estimates the sales of wheat at 250,000 to 300,000 bushels, and 400,000 bushels of rye.

Millfeed.—The tone of the market for millfeed continues strong under a continued active demand, and it was reported that sales of straight car lots of Manitoba bran are being made at an advance of 50c to $1 per ton at $22.50 and $23 and shorts at $24.50 to $25 per ton, including bags, ex-track, while broken lots of bran in mixed car orders with flour selling at $22, shorts at $24, and middlings at $29 per ton, including bags. A stronger feeling prevails in the market for rolled oats and an advance in prices may be expected at any moment. The demand is good, with sales of standard grades at $3.15 per bag of 90 lbs., delivered to the trade.

Baled Hay.—A steady feeling prevails in the market for baled hay, but the volume of business passing on spot is not large, the demand being chiefly for lots to meet immediate wants. Car lots of good No. 2 Timothy are quoted at $16 to $17, No. 3 Timothy at $14 to $15, and clover mixed hay at $12 to $13 per ton, ex-track.

MANAGER OF SHIPPING FEDERATION ON FLOUR AND WHEAT EXPORT RATES

The action of the Canadian milling industry in sending a delegation to the Prime Minister to ask for more favorable treatment in connection with the transportation of their products, stating that the freight rates on grain products for export, from Georgian Bay ports to Montreal and St. John, are too high in comparison with the rate on grain shipped to the same ports for export, brought a protest recently from local shipping interests.

"The reasons why a difference exists in the rates quoted for the carriage of these commodities," said Mr. Thomas Robb, manager and secretary of the Shipping Federation of Canada, in discussing the situation, "is because wheat stows in 48 cubic feet to the ton, while flour stows in 60 cubic feet. It therefore takes 12 more cubic feet to stow a ton of flour than a ton of wheat, which is equal to about 25 per cent. Grain is mechanically handled and is delivered to steamships at the rate of approximately 12,000 bushels per hatch per hour, equal to 325 tons, while flour, on the other hand, can only be loaded at the rate of 25 tons per hatch per hour.

More Expense and Labor

"The expense in receiving, loading and stowing flour forms a considerable item. It is first received from carts or cars, stowed in the sheds, trucked to the gangways, loaded on to slings and then stowed in the hold, all of which entails considerable labor. It requires special stowage in the hold owing to the fact that it taints easily if placed in close proximity with strong smelling products. Heavy claims are a common occurrence in handling flour, while in the case of grain they are negligible. Another point which the miller must not lose sight of," said Mr. Robb, "is that the grain man gives his traffic at the ship's call, while the miller gives his traffic at his option and sometimes not at all."

At a previous interview between the millers' representatives and the Government, at which the former gave a full explanation of their views as to the detrimental action on their business of the difference between grain and flour rates, they admitted, claimed Mr. Robb, that the steamship companies' contention as to the extra cost involved in handling flour as compared with grain was correct, and that their object was to ask the Government to meet the situation by what practically amounted to a subsidy to the milling industry. On being asked what form such a subsidy should take, if the Government agreed to entertain the proposition, Mr. Robb proposed that the Canadian Government vessels should be instructed to carry flour at the same rate as wheat. This, the Premier said, would be a subsidy in effect, and in his opinion in an objectionable form. In answer to representatives of the shipping interests present, the Premier agreed that if the extra cost of handling flour as compared with grain could be justified, then the steamship companies could not be asked in justice to sacrifice their revenue in order to take care of a disability under which the millers appeared to be laboring.

ED. NOTE.—An editorial reply to the above article will be found on page 13 of this issue of "Canadian Milling & Grain Journal."

MAY UTILIZE SCREENINGS OF LOCAL ELEVATORS FOR SHEEP FATTENING

Montreal may in the near future add to its already varied activities a brand new industry — of considerable value and great economy. This is the utilization of grain elevator screenings for the feeding and fattening of sheep during the winter months. In other words, this method, already tried with great success by Alberta sheep owners, at the head of the lakes, converts mere waste into valuable fodder, and may well bring about a steady growth in sheep raising in the province.

Last winter, Mr. R. C. Harvey, of Lethbridge, in Southern Alberta, stated to be the largest individual sheep rancher in Canada, leased a large warehouse on the Kaministiquia River at Fort William, Ontario, and early in November brought ten thousand sheep from his Alberta ranges to the lake port. All winter they were fed on screenings from the various elevators, procured for next to nothing. This was merely an experiment in feeding, but proved in all respects a complete success. The animals thrived and gained steadily in weight, being marketed in the spring at good prices at Toronto and Buffalo.

Mr. Harvey, it is understood, will this winter continue this method of feeding on a much more extensive scale, and plans to bring some fifty thousand sheep from his Alberta ranches to the Fort William elevators before the snow has enforced winter feeding in Southern Alberta. His experiment was watched with intense interest last winter by Western ranchers, and others with large flocks of sheep, it is expected, will follow the example he has set and send sheep to various terminal elevator points for seasonal feeding.

The following nominal quotations on bran and shorts have been reported by the Canadian National Millers' Association, Coristine Building, Montreal, to the United States Customs Authorities as the prices of these commodities now in effect. These prices are the net cash prices in bulk, f.o.b., the mill:

	Bran	Shorts
Montreal	20.00	22.00
Toronto	20.00	22.00
Port Colborne	15.50	17.50
Fort William	13.50	15.50
Keewatin	14.50	16.50
Winnipeg	13.00	15.00
Moose Jaw	10.00	12.00
Calgary	10.00	12.00

FRENCH FLAX SITUATION PRESENTS OPPORTUNITY FOR CANADIAN PRODUCT

Paris.—Deprived of its former main source of supply, the Russian crop (which constituted four-fifths of the world's flax production), France has now been compelled to rely for the greater part upon the domestic yield and upon the surplus production of its neighbors, Belgium and Holland.

Pre-war, France imported on an average from 75,000 tons of flax from Russia. In 1921 her importations from that source were about 4,000 tons, and for this year it is estimated that about 8,000 tons would be obtained. A Franco-Belgian syndicate is actually operating in the Baltic States with a view to securing for both countries the surplus supplies needed by their respective textile trades.

France's consumption of fibre flax from all sources has increased since the Armistice until it is at present estimated at the rate of about 22,000 tons per year. Nearly two-thirds of this quantity is home-grown, though half of the crop is purchased in the straw by Belgian retting plants and transported by rail and canal to Courtrai, where it is retted, scutched, and eventually re-exported in part to French spinners. In respect of present flax-fibre consumption, roughly one-third is supplied from local production, one-third imported from Belgium, and one-third imported from Russia, Holland furnishing but a negligible quantity. The volume of scutched fibre thus employed, added to the importations of spun linen yarns from the United Kingdom and from Gand (Belgium), taken together, seem to provide for all the necessary requirements of the linen trade of France at the present high prices. Greater absorption of the manufactured product will, however, follow as fibre prices diminish.

A market thus exists for Canadian flax at a superior price in competition with that supplied from Russia. The Russian product is, for the most part, dew-retted and generally possesses great tensile strength. This quality is understood to be peculiar to the Canadian raw fibre also, but has been assumed, in respect of the lots already unfavorably criticized, that the deficiency complained of was due to artificial retting or drying.

What few samples and small shipments of Canadian flax have been sent over to French importers during the past two years have created a favorable impression, due to their being well scutched and free from tow.

THE CHICAGO MARKETS

The following table compiled from figures furnished by Messrs. Logan & Bryan, members of the Winnipeg Grain Exchange and the Chicago Board of Trade, C.P.R. Telegraph Chambers, Montreal, show highest price levels recorded on Chicago Board of Trade from Oct. 27, 1922 to Nov. 11, 1922, inclusive.

	Oct. 27	Oct. 28	Oct. 30	Oct. 31	Nov. 1	Nov. 2	Nov. 3	Nov. 4	Nov. 6	Nov. 7	Nov. 8	Nov. 9	Nov. 10	Nov. 11
December Wheat	1.15 1/8	1.15 3/8	1.15 3/8	1.14 3/4	1.16 7/8	1.17 5/8	1.17	1.15 7/8	1.16 5/8		1.16 1/2	1.15 1/4	1.15 1/2	
May Wheat	1.13 1/2	1.13 1/2	1.13 3/8	1.13	1.14 1/4	1.14 3/4	1.14 3/8	1.14 3/8	1.16 3/8		1.16 1/4	1.14 3/4	1.14 5/8	
July Wheat	1.06 1/8	1.06 1/8	1.05 1/2	1.04 7/8	1.05 3/4	1.06	1.05 3/8	1.05	1.06 7/8		1.06 1/2	1.06	1.06	
December Corn	0.68	0.68 1/8	0.67 1/4	0.66 7/8	0.68 1/4	0.69 1/8	0.68 5/8	0.68 1/4	0.69 3/8		0.70 3/8	0.69 1/4	0.69 1/4	
May Corn	0.68 1/8	0.68 3/8	0.67 5/8	0.67 1/8	0.68 1/4	0.69	0.68 3/4	0.68 3/4	0.69 5/8		0.70 3/4	0.70	0.70	
July Corn	0.67 1/2	0.67 1/2	0.67 1/8	0.66 3/4	0.68	0.68 5/8	0.68 1/4	0.68	0.68 7/8		0.70 1/8	0.69 3/8	0.69 3/8	
December Oats	0.42	0.42 1/4	0.41 7/8	0.41 7/8	0.42 1/2	0.42 7/8	0.42 5/8	0.42 3/8	0.42 3/4		0.43 1/8	0.42 5/8	0.42 1/2	
May Oats	0.42 3/8	0.42 1/2	0.42 1/4	0.41 7/8	0.39 3/4	0.42 3/8	0.42 1/4	0.42	0.42 1/2		0.42 7/8	0.42 1/2	0.42 1/2	
July Oats	0.40 1/8	0.40 1/8	0.39 7/8	0.39 5/8	0.39 5/8	0.40	0.39 5/8	0.39 5/8	0.39 3/4		0.40 1/8	0.39 7/8	0.39 1/2	
December Barley	0.64 1/2	0.64 1/4	0.64 1/2	0.64 1/2	0.64 1/2	0.67	0.67	0.67	0.67 1/8		0.60	0.60	0.60	
May Barley	0.62 1/2	0.63 1/4	0.63 1/2	0.63 1/2	0.63 1/2	0.63 1/2	0.63 1/2	0.63 1/2	0.63 3/8		0.63 3/8	0.63 3/8	0.63 3/8	
December Rye	0.80 3/4	0.81 1/4	0.82 3/8	0.82	0.83 5/8	0.85	0.84 1/4	0.83 3/8	0.83 7/8		0.85 1/4	0.84 3/4	0.84 3/4	
May Rye	0.81	0.81	0.81 1/4	0.80 5/8	0.82 1/2	0.83 1/8	0.83 1/8	0.83	0.83 1/8		0.85	0.84 3/4	0.84 3/4	

Board of Trade closed. Election Day. Board of Trade closed Armistice Day.

Ontario

TORONTO

TORONTO NOVEMBER 15TH. 1922

THE TORONTO MARKETS

Flour.—Following a period of some activity in the export flour market there has occurred somewhat of a lull lately. The market has fallen off slightly and buyers are not following the higher prices. Manitoba export patents are quoted at 40 shillings ($8.90), with Ontario winter wheat flour at thirty-eight shillings and six pence ($8.66.) As fas as the domestic market is concerned some fairly good business is passing. Most of the bakers are reported to have bought their requirements up to the end of March. Winter wheat flour is rather scarce owing to farmers holding up their wheat and there is a good export demand for winter wheat flour through the United States. It is pointed out that wheat exporters are actually paying more for their wheat than the millers can afford to pay for it, and the price of flour is relatively below that of wheat, due largely to the grain men having been short and paying premiums to get it. In the domestic market $6.40 is quoted for second patents and $6.90 for top patents, these prices representing a raise of ten cents which went into effect recently. In this connection it is interesting to note that ocean freight rates have been reduced three cents for December shipments, twenty-two cents now being asked for December against twenty-five cents for November to United Kingdom ports.

Millfeeds.—Prices for millfeeds are up two dollars, bran now being quoted at $22.00 and shorts at $24.00, Montreal freights. The increased prices are due chiefly to the transportation difficulties and the good prices being offered in the United States market. Both domestic and export demand is good.

Cereals.—There is no change in the rolled oats situation. Both the domestic and export markets remain dull, with $3 quoted in the domestic market and 43 shillings ($9.16) for export. The poor demand in the Old Country is apparently due to the wet weather and the consequent injury to the crops, oats having been thrown on the market in a damp condition. Local dealers anticipate a brightening in the market by the first of the year.

Grain.—Ontario grains have shared in the general firmness of the market during the past ten days, and dealers state that they are receiving daily good bids from foreign buyers for Ontario wheat and rye at the seaboard, but are unable to fill these owing to lack of cars. Transportation difficulties are such that it is difficult to get any quantity moving. In some cases seaboard exporters are so anxious to obtain grain to fill contracts that they will pay a substantial premium for supplies in transit over anything quoted on an f.o.b. basis. Heavier deliveries are expected late in the season when the farmers are through with their fall work, and this, according to some dealers, may bring lower prices. The first half of the month closes on the Toronto market with millers buying only in moderate quantities. Demand for Ontario grains continues good, with rather light deliveries. Dealers are looking for more liberal supplies to come forward, however, as soon as the weather makes it possible for the farmers to work on the land. No. 1 Northern Manitoba wheat is quoted at $1.19½; Ontario oats, No. 2 white, 41c to 43c, according to freight outside; Ontario wheat, No. 2 winter, per carlot, $1.08 to $1.13; No. 3, $1.03 to $1.08, f.o.b. shipping point, according to freight; Ontario barley, malting, 59c to 62c; Ontario buckwheat, No. 2, 71c to 73c; Ontario rye, No. 2, 76c to 79c.

GOVERNMENT REFUSES REVISION OF FLOUR AND WHEAT EXPORT RATES

Ottawa.—The Governor-in-Council has declined to grant the petition of representatives of the Canadian flour milling industry for a review of the recent judgment of the Board of Railway Commissioners in regard to flour arbitraries over wheat for export. The hearing of the petition took place before a sub-committee of the Cabinet on April 19 of the present year, Mr. D'Arcy Scott, of Ottawa, appearing for the millers. It was represented at the time that the freight rate on grain products for export from Georgian Bay ports to Montreal and St. John were too high in comparison to the rate on grain for export to the same ocean ports. Discrimination against the millers was being shown in these rates, it was argued.

The Governor-in-Council having declined to grant the petition for review, the judgment of the Board of Railway Commissioners continues in force.

ED. NOTE.—Some editorial comments on the foregoing despatch appears on page 13 of this issue of "Canadian Milling & Grain Journal."

PROMINENT SCOTCH FLOUR IMPORTER SPEAKS OF EUROPE'S CEREAL NEEDS

Toronto.—Mr. Andrew Law, of Glasgow, a partner in the firm of Messrs. Crawford and Law, importers of Canadian flour in a big way, and now in Toronto for a short visit, and whose visit to this country was reported in "Canadian Milling & Grain Journal," issue of Nov. 1, page 24, stated recently that Europe would require all of Canada's surplus wheat, large though the present season's crop has been.

The European markets, he stated, were very unsettled, and possible consumption of grain difficult to determine. With the continental nations in an impoverished condition as a result of their war experiences, and their citizens in many instances living on the poverty line, Europe's purchasing power had in consequence been sadly depleted.

The people might statistically require a certain amount of wheat, but when harassed by extreme poverty they would have to be content with less. They must pull the belt a little tighter and reduce consumption of wheat and flour to the minimum.

Even under these circumstances, however, the potential demand would be adequate to fully take care of Canada's surplus, but just what influence such a condition of affairs would have upon grain prices, Mr. Law was not prepared to state.

MR. JAMES STEWART TO BUILD TWO MILLION BUSHEL HOUSE AT LAKES HEAD

Fort William.—Test piles have been driven in a site 400 yards north of the Thunder Bay elevator on which an elevator plant with a storage capacity of two million bushels is to be erected for James Stewart, chairman of the war time wheat board, and his associates.

Preliminary work is to be carried forward with all possible dispatch and work is to start at the earliest possible date.

Mr. Stewart is probably Canada's best known grain man. He is the moving spirit in the Saskatchewan Co-operative Grain Export Company, Limited, which at present leases elevator facilities from the Saskatchewan Co-operative Grain Company, Limited. It is said that the company has long felt the need of additional facilities at the lakehead.

Mr. C. D. Howe is the engineer in charge of the work as far as it has progressed locally. The piles are being driven by a crew of the Thunder Bay Harbor Improvement Company.

GRAIN RUSH IS UNPARALLELED

Port Arthur.—The head of the Lakes is witnessing a tremendous rush of all-rail shipments of grain from the Canadian west, both on the Canadian Pacific and on the Canadian National Railways, such as has never before been known in the history of these Lake ports. All-rail shipments do not usually commence until December 12 or thereabouts when Lake navigation has stopped, but during the past two weeks 150 cars a day, representing about 200,000 bushels of grain have been sent out all-rail for the eastern markets.

The reason for this rush is the congestion of grain at Buffalo. The Buffalo elevators are glutted and boats are waiting in the harbor at Buffalo for their turn to go under the spouts.

TRADE OPPORTUNITIES

No. 283.—Messrs. D. Dorman & Sons, Waring St., Belfast, Ireland, would like to get in touch with Canadian exporters of linseed cake.

No. 284.—The Canadian Trade Commissioner in Holland, Mr. Norman D. Johnson, and whose cable address is "Watermill, Rotterdam," reports that there is a good demand in Holland at present for Canadian flour. Mills interested in representation or direct export business are invited to communicate quotations for straights and patents.

No. 285.—Messrs. I. Solomon & Sons, Ltd., 144 Harbor Street, Kingston, Jamaica, are in a position to handle 1,000 bags of Canadian flour monthly. The firm have heretofore purchased through agents hands but are now anxious to arrange for shipment under their own private brand. The larger volume of this firm's business is done in "bakers flour," but they can also find a market for a grade which is practically a first clear. This firm is also interested in corn meal and invites interested millers to send samples.

The Modern Sophocles

ON the grim battlefield the soldier that sings is better fitted to fight. The grouch gets sulky, lacks courage, and his influence is a menace.

So it is on the battlefield of business. The sour, pessimistic cuss who never smiles or sings is a commercial coward every time. As an employee, he is the most expensive luxury we have. He hates his job. His one ambition is to get out of the office, store or plant, and jazz. He can see a smile only after six o'clock. He rushes from the job, changes his clothes and starts out for fun. Life holds nothing for him but the hours after work.

Play is an important part in the programme of life, but work must be done before we can afford to play.

ST. JOHN, N.B., EXPECTS BUSY SEASON

St. John, N.B.—Prospects for a busy winter port season at St. John are held out by the railway managements of the country, particularly with regard to grain business. The C. P. R. management has announced that grain shipments this winter would be extremely large, and prospects appeared bright for a heavy port business this season. The C. N. R. announcement is of a similar nature. The foreign freight agent of the Government system has declared that there would be an unusually large amount of grain shipped through Canadian ports this winter instead of through United States ports, on account of the effects which he anticipated still would be felt of the coal and railway strikes across the border. If the steamers were available, he expected that the C. N. R. elevator at St. John would operate at full capacity during the winter.

OBITUARY

Mr. Adam G. Thomson, one of the best known grain merchants of Montreal, died recently at his residence, 139 Metcalfe street, in his 76th year, after a lengthy illness.

He was born in Scotland and came to America at the age of twelve, settling with his father at Norwich, Vermont. After residing there several years the family moved to Montreal, and he lived here ever since.

As a young man he entered the grain business, and became associated with the firm of Messrs. James Kenshaw and Co., and later with Rimmer, Gunn and Company. When this firm went out of business he formed the firm of Messrs. A. G. Thomson and Company, with offices in the old Corn Exchange Building, on St. Sacrament street. It was one of the first business firms to instal a telephone and their number was Main, One. This number is still with the present firm. In January, 1909, he entered into partnership with P. B. Earle under the name of Thomson and Earle, which concern was known during the war as the Wheat Exchange Company of Canada.

Western Provinces

WINNIPEG

WINNIPEG NOVEMBER 15TH. 1922

THE WINNIPEG MARKETS

Flour.—Flour mills in Western Canada appear at the present time to be in a very favorable position. They are well supplied with orders, are able to get all the wheat they require and so far have not been troubled to any great extent in shipping their sales to destination. This has resulted in enlarged business and practically all mills are running to capacity. The heavy movement of grain eastward has naturally made it difficult at times for millers to secure the required number of cars, but the more serious trouble has been that of shipping south of the International boundary owing to the great scarcity of railway cars in the United States, and this loss of trade has been chiefly felt by the smaller mills, who would, if conditions were otherwise, be enjoying a considerable trade with American towns and villages along the border. The Canadian railroads absolutely refuse to permit their cars to cross the border owing to the long delays before they are returned, and the American railroads have not the cars to spare for this trade.

It would appear, according to a well-known Western manager, resident of Winnipeg, that the great activity now being witnessed by Canadian mills, perhaps more especially the larger ones, is due to some extent to the loss of export business by the American millers, who have in many instances been unable to fill their contracts, as they could not get cars wherein to send the flour from mills to seaboard to ship on a guaranteed date. When the foreign importers of flour have purchased from American millers with seaboard clearances guaranteed by a fixed date, they have found that the shipment has not even left the mill by the time it was supposed to be ready for loading on shipboard. This has resulted in disappointment to the foreign customers and somewhat strained relations between them and American millers, and is followed by cancelled orders which are placed in other countries.

At the present time, Canada with her large crop of high grading wheat, is a keen competitor in the flour markets of the world, and is undoubtedly getting results. In the United Kingdom, Holland, Scandinavia and other European countries, there has been a steady increase in flour imports from Canada, with a corresponding decline in shipments from the United States.

The majority of the large mills in the west, it is learned, have now on their books sufficient orders to keep them busy until the end of the year. Just where all this flour is going cannot be ascertained in Winnipeg, as the orders are received here through the head offices of the companies in Eastern Canada. Further, the price obtained for export flour is not known here. Exports of Canadian flour to the Orient continues steady, and there appears to be an enlarging market here, especially for the lower grades.

The market here is very firm under the influence of wheat, and prices show little change. Present quotations are: For delivery at points between Fort William and the Saskatchewan boundary, first patent springs are quoted at $6.30 bbl., jute bags, second patent at $5.70, and first clears at $5, mixed cars, 30-day terms; cotton 10c over this basis. Saskatchewan and Alberta points are 10c under Manitoba, and Pacific Coast points 30c to 50c over. Bakers and other carlot buyers get special prices.

Millfeed.—The demand for millfeed is excellent and increasing. Stocks are not heavy but sufficient to take care of the demand. Bran is still quoted at $17 per ton in mixed cars with flour, and shorts $19, in bags, delivered, Winnipeg territory.

Oatmeal.—The demand for rolled oats and oatmeal is becoming a little brisker and trade shows increasing volume. Prices are very firm and a little higher than at last report. Rolled oats are now quoted at $2.50 to $2.60, in 80 lb. cotton bags, and oatmeal $3.05 to $3.15, in 98 lb. cotton bags, delivered Winnipeg territory.

Steady wheat markets with a good, firm undertone prevailed throughout the latter part of October and early part of November, and although the deliveries have continued extremely heavy, the good export demand, coupled with domestic buying, has been sufficient to maintain prices. At times prices showed a tendency to weaken in sympathy with weakness in American markets or easier cables, but the market received good support on any slight break and made quick recoveries. There has been a good, steady export demand for wheat, but it appears that the port of Montreal has been unable to ship it out fast enough to satisfy foreigners, and considerable amounts of Gulf wheat has been taken at a price which is reported to be cheaper than the Canadian price.

Advices from Ottawa that the government had lifted the coasting laws, permitting American boats to ply between Canadian ports, was received with mixed expressions of opinion by the trade. It is getting pretty late in the season, and it was stated that all the wheat was now going across the lakes that eastern facilities can handle. Many of the large shippers, it was stated, had already contracted for lake tonnage to fill their requirements from now till the close of navigation, at a rate considerably higher than what it is believed will be quoted when the coastal laws are lifted. On one point all were agreed, that the addition of the American boats will greatly relieve the situation, in so far as winter storage is concerned, and possibly prevent any congestion at Fort William before the close of navigation.

A high proportion of the Canadian wheat crop continues to grade No. 1 Northern, and the heavy supplies of this grade were responsible for the large amount passing through the clearing house during the latter part of October. The demand for other cash grades has, generally speaking, been good, but trading in the future cash market has been light on account of the narrow premiums bid.

WINNIPEG GRAIN MEN CHALLENGE CRITICS IN YORKTON CASE AND OBTAIN COMPLETE SATISFACTION

Winnipeg.—The Winnipeg Grain Exchange has made a recent radical change in tactics toward its critics and has ceased to be on the defensive and has assumed the offensive with decisive results in at least one instance and with good prospects for another. Two Yorkton, Sask., newspapers have published a retraction from an erring farmer critic and both papers express regret.

On September 21st of this year the Yorkton Press and on September 19th the Yorkton Enterprise published a letter from a local grain grower, Mr. W. D. Dunlop, who was the Conservative candidate in the Federal election last year. He stated he had sold a car of wheat to a local company, that it graded No. 1 Northern, and the price on date of sale, September 11th, being 98¼, he claimed he was entitled to that for his wheat; but the return was only 85½ cents, he further claimed the explanation was given by the local buyer that the Winnipeg Grain Exchange had ruled that wheat with a dockage over four per cent. was to be graded as "rejected" wheat, for which the price was as stated 85½ cents. The fact in the case was that the Government inspector at Winnipeg had graded the car No. 1 rejected, which relieved the company from responsibility; they had paid Mr. Dunlop all he was entitled to receive, emphasis was put by Mr. Dunlop in his letter on the idea that the Grain Exchange "can make any ruling it thinks fit, and it is quite evident there is no person there to put in a word for the interests of the farmer." In a fervent "wind-up" that redoubtable body the Winnipeg Grain Exchange was given a parting salute.

Messrs. Pitblado, Hoskin and Company took up the matter for the Grain Exchange, pointed out that the Exchange had no power to make such rulings as had been alleged, that inspection was entirely under the control of the Dominion Government and that the Yorkton newspapers could easily have learned these facts had they made the minimum amount of effort to do so.

The direct result of the statement of the case made by the solicitors was that Mr. Dunlop retracted his statement and expressed regret in the Yorkton Press and Enterprise two weeks ago, and both papers stated they had published the letter in the usual way as news and regretted its appearance.

SAY MORE ELEVATOR ACCOMMODATION NEEDED AT MONTREAL TO EXPEDITE GROWING GRAIN EXPORT BUSINESS

Winnipeg.—While splendid records are being made by the Canadian railways and shipping companies in handling the 1922 crop, and the grain growing fraternity are ahead about eight million dollars in reduced freight rates as a result of the resumption of the Crow's Nest rates on grain, the charges on the water haul have been taking toll above what used to be considered sufficient. Competent judges among export grain handlers assert that if the grain could be put through promptly at the east end of the haul an additional six or seven cents could be added to prevailing prices for wheat. The difficulty, they claim, is chiefly at Montreal, where there is not adequate elevator capacity to take care of the grain and to meet the capacity of the ocean tonnage which has been available this season. The completion of the Welland Ship Canal next year might result in some change and make Kingston the port for transfer from the big upper lake carriers to the smaller craft for the 14-foot canals of the St. Lawrence. But that again will call for more elevator capacity than is now possessed by Kingston. From the western viewpoint it appears as if the Federal Government would be justified in making generous provision for much larger elevator capacity at both Montreal and Kingston.

Getting Tonnage for Montreal

The experience of shippers this season is that there is not much difficulty in getting bottoms for grain; the chief difficulty has been at Buffalo and Port Colborne in getting tonnage at reasonable rates to carry cargoes to Montreal. For some time the outgoing shipments all-rail out of the twin cities and have amounted to about 200 cars daily, mostly for eastern millers. That sort of active shipment usually waits for the close of navigation. This season, on account of the enormous crop and high rates demanded by the carriers, the shippers have been taking refuge in the railways. The vessel owners have been in many instances adding new clauses to the old contracts, but the shippers have not been taking much notice of the innovations.

THE WESTERN MARKETS

The following report furnished by Messrs. Baird and Botterell, 103 Grain Exchange, Winnipeg, shows daily highest price levels from Oct. 27, 1922, to Nov. 11, 1922, inclusive.

	Oct. 27	Oct. 28	Oct. 30	Oct. 31	Nov. 1	Nov. 2	Nov. 3	Nov. 4	Nov. 6	Nov. 7	Nov. 8	Nov. 9	Nov. 10	Nov. 11
November Wheat..	1.00¼	1.06⅛	1.06	1.05⅛	....	....	....	....		....	....	....	....	....
December Wheat..	1.00¼	1.00⅛	1.00½	0.99⅜	0.99⅞	1.00⅝	1.00⅝	0.99¾		1.00½	1.01¼	1.05¾	1.00⅜	1.00⅜
May Wheat.....	1.04¼	1.04¼	1.04⅞	1.03⅝	1.04	1.04⅝	1.04⅝	1.03¾		1.04½	1.04⅞	1.00½	1.04¼	1.04¼
November Flax....	2.19½	2.18½	2.17	2.17	....	....	....	....		....	....	....	....	....
December Flax....	2.07	2.05¾	2.04	2.01½	2.02¼	2.04½	2.03½	2.03		2.01½	1.99	1.93	1.93¾	1.92¼
May Flax.....	2.03½	2.01¼	2.02½	2.00	2.01	2.04	2.02½	2.00½		1.99¾	1.96½	1.93	1.92¼	1.91
November Rye....	0.76	0.75¾	0.75½	0.75½	0.77⅛	0.78⅛	0.79	0.78½		0.79¼	0.80⅝	0.80¾	0.82¾	0.83
December Rye....	0.72⅞	0.72½	0.72	0.71⅝	0.73⅛	0.74⅜	0.75	0.75½		0.76	0.78⅞	0.77½	0.78¼	0.78
May Rye.....	0.76¼	0.76¾	0.76¼	0.76	0.77	0.78⅞	0.78⅝	0.78½		0.79	0.80½	0.80⅛	0.80¾	0.80¾
November Barley..	0.52¾	0.52¾	0.52¼	0.51½	0.52¼	0.52⅞	0.53	0.52⅝		0.53	0.53⅜	0.53½	0.53⅝	0.52¾
December Barley..	0.52½	0.52½	0.52	0.52⅝	0.52	0.53	0.52⅞	0.52⅞		0.52⅝	0.53	0.53	0.52¾	0.52⅜
May Barley.....	0.56¾	0.56¾	0.56¼	0.55½	0.55⅞	0.56½	0.56⅝	0.56½		0.56½	0.56¾	0.56½	0.56½	0.56⅜
November Oats....	0.43	0.43¼	0.42¾	0.42⅛	0.42⅜	0.42⅞	0.42⅞	0.42⅝		0.42⅞	0.43¼	0.43	0.43	0.42¾
December Oats....	0.40	0.40⅛	0.39⅞	0.39¾	0.40	0.40⅜	0.40⅛	0.40		0.40⅛	0.40½	0.40⅛	0.40⅛	0.39⅞
May Oats.....	0.40⅜	0.43⅜	0.43⅛	0.42⅞	0.43	0.43¼	0.43⅜	0.42¾		0.43	0.43	0.43⅛	0.43⅛	0.43⅛

Thanksgiving Day. Exchanged Closed.

Foreign Flour and Grain News

THE old adage, "It's an ill wind, etc.", would appear to be singularly applicable in regard to the present flour export situation which continues to be favorably maintained. As a result of the inability of western United States millers to secure sufficient cars to carry their products to seaboard for export, Canadian millers have been securing a tremendous amount of new foreign trade, and it is most satisfactory to note in this connection that quite a few new orders have been coming in from the British West Indies, in which the United States are unquestionably Canada's strongest competitors.

Not only are shipments of Canadian flour to the West Indies increasing, but there has been a strong demand for the Canadian product from Holland, Scandinavia and other European countries, not to mention Great Britain, which is buying more Canadian flour than ever.

It cannot be too strongly urged upon Canadian millers that with the splendid opportunities now being presented to them they should not only seek to fill the orders they are obtaining in a manner most satisfactory to their new customers, but that they should leave nothing undone to strengthen their new connections and hold the trade coming to them. The marketing of low grade flour in the Orient continues to show satisfactory results, and should be given special attention with a view to the future.

Grain prices have been holding steady of late, offerings are light and buying without forcing quotations up is difficult. New export business has not been very brisk although there is a continuously steady demand, and undoubtedly small lots are being worked daily. It is reported that Ontario dealers, owing to car shortage, are finding it difficult to fill overseas orders for Ontario wheat and rye. The situation, however, is not regarded as being likely to last for any length of time. Deliveries are light but are expected to increase in volume when the farmers have completed their fall work.

ROUMANIA—Sowing of wheat and rye is being carried out under favorable weather conditions, and an increased acreage seems probable. The Government is endeavoring to encourage the cultivation of wheat and rye by providing growers with seed corn, and as prices of oats and barley have recently declined, it is very probable their efforts will meet with some success. However, whilst Government control remains in force, it is not likely that these cereals will be grown on a pre-war scale. Picking of maize is now mostly complete; some reports of outturn are rather better.

JUGO - SLAVIA — Weather conditions could scarcely be more favorable for the sowing and germination of the new winter crops, and in some fields the young wheat plants are already three inches high. Picking of maize is now mostly complete, and the opinion is expressed that the damage sustained through heat and drought is less severe than anticipated. Following a recent special investigation, the Ministry of Agriculture reports there are at present 1,100,000 tons of surplus grain in the country. Stocks of old crop grain are unusually large.

INDIA—The crop situation is generally good, and in many places excellent. Fairly widespread rains have been experienced in Northeast India and in the Centre and South of the Peninsula. Parts of Western India have been greatly in need of rain, but the latest falls extended to this region.

ARGENTINA—Warmer seasonable weather has been experienced during the past month, and very favorable reports continue to be received regarding the condition of the crops. A report by the Anglo-South American Bank states that prospects for all cereals in Argentina this year are quite exceptional. However, a period of two or three weeks has yet to pass before the commencement of harvest, but to ensure good returns, the crops only need a few good rainfalls, combined with absence of frosts and locusts. Light rains have fallen.

AUSTRALIA—The probable total outturn of wheat will be 105 million bushels, which compares with 110 millions previously estimated and 130 millions, the final official of last year. The indicated surplus is 60 million bushels. In South Australia, West Australia and Queensland the yields this year will probably be larger than in 1921, but smaller in New South Wales and Victoria.

HUNGARY—The latest official estimates of this year's crops are the following:

	Revised estimate, 1922.	Final estimate, 1921.
Wheat .....qrs.	5,630,000	6,590,000
Rye ..... "	2,500,000	2,710,000
Barley ..... "	2,500,000	2,570,000
Oats ..... "	2,220,000	2,180,000
Maize ..... "	3,780,000	3,880,000

The estimate of the maize crop has been raised by approximately 800,000 quarters, and is now shown to be very little inferior to that of last year. The estimates for other crops show very little change compared with the previous figures.

MANCHURIA.—A recent cable describes the new crop as excellent.

SPAIN.—A poor crop is reported in Andalusia.

C. P. R.'S RECORD GRAIN HANDLING

Winnipeg.—To date the Canadian Pacific Railway has handled a total of 56,733 cars of grain, and more than 63 per cent. of the total of 49,735 cars of wheat handled here graded No. 1 northern or better. The latter consisted of 130 cars of Manitoba hard. Of the total amount of wheat inspected in Western Canada, Canadian Pacific cars transported 56.1 per cent., while other roads carried 43.9 per cent.

Indications that the peak of the grain movement to the head of the Lakes by the Canadian National System has not been reached are shown by late heavy shipments, when 1,839 cars, and 2,140,000 bushels were shipped, as compared with approximately 1,400 cars for the corresponding period last year.

The Elevator Operator

WHY CEMENT IS REGARDED AS CHEAPEST OF BUILDING MATERIAL

There can be no doubt regarding the important part that the building industry plays in the business life of this country. Its interests are so widespread that even the suspicion that building costs are excessively high may seriously retard the increased business activity that is so much to be desired. The consumer is entitled to a frank statement of the facts as to the cost of manufacturing and the selling price of construction materials. In a recent issue of Engineering News-Record, New York, there is an article by Mr. L. R. Burch, Assistant to the President of the Atlas Portland Cement Company, which gives some very complete information regarding the cement industry. The selling price of cement is practically identical in Canada and the United States, and if allowance is made for the increased cost of plant construction, and if the much higher price that must be paid for fuel in Canada is taken into consideration, the statements in this article are typical of conditions in the cement industry in Canada.

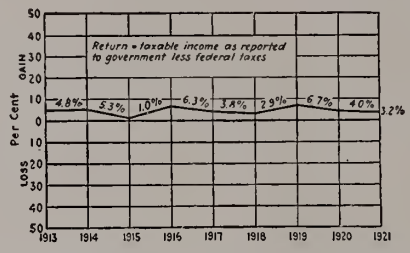


Fig. 1.—Return on investment of 19 companies. Average percentage earned on invested capital by 19 companies in north-eastern States, based on income tax returns.

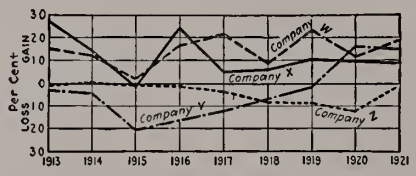


Fig. 2.—Return on investment of 4 companies. Individual earnings of two most profitable companies and losses of two heaviest losers.

The figures and data concerning the costs of building materials have been taken from government documents, from evidence in recent investigations of the industry, and from the records of the Atlas Portland Cement Co.

Three methods of dealing with the subject are developed. One is to take earnings on investment as reported to the government for income tax payments. Another is to analyze the selling price of a barrel of cement as compared with the cost of producing it. A third is the relative position of cement in the "Price Curve" for various building materials.

Earnings on Investments

Fig. 1 shows the average percentage earned on invested capital by nineteen companies operating in North-Eastern United States from 1913 to 1921 inclusive. It will be noticed that in the best year, 1919, the return was 6.7 per cent. before dividends on stock were paid, while in 1920 the return was only 4%. Fig. 2 shows the returns during the same period for the two companies showing the greatest profits and the two showing the greatest losses. The best average earnings over the period were only 13% and the highest percentage for any individual company was in 1913 when 27% was earned. These figures are taken from court records and are accurate. Earnings are not hidden in high salaries and invested capital considered is much less than present replacement cost. The invested capital in 1921 was only $80,000,000, an increase of about $15,000,000 since 1913.

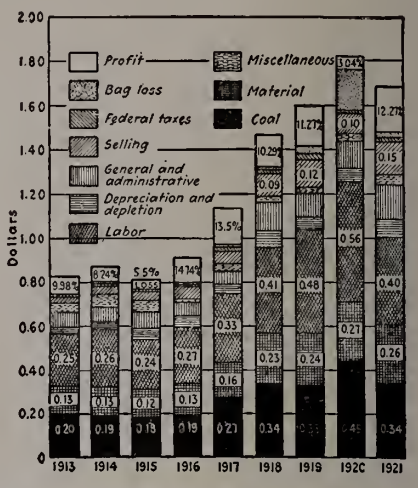


Fig. 3.—Elements of cost in a barrel of cement.

It is a fact that there are very few, if any other industries where the investment per unit of sales is so great. There is a capital investment of more than $2.50 per barrel of annual output. (A million barrel plant means an investment of two and one-half million dollars and a ten million barrel plant a twenty-five million dollar investment on the basis of present replacement value.)

The rate of turnover of capital is comparatively slow. The United States Geological Survey says, "The rate of turnover of capital is necessarily much faster in the iron industry than in the cement industry, in which the rate of turnover is practically

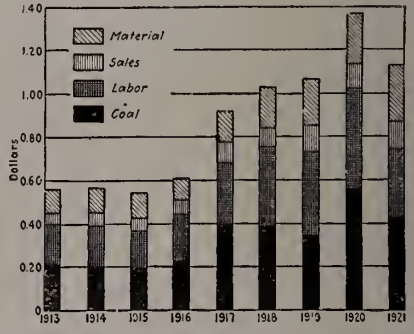


Fig. 4.—The four principal elements of cost. Based on records of 17 eastern companies and expressed in dollars per barrel.

The Elevator Operator

slower than that of any other industry. In other words, if the profits per ton were 10 per cent. of the selling price of both pig iron and cement, the returns

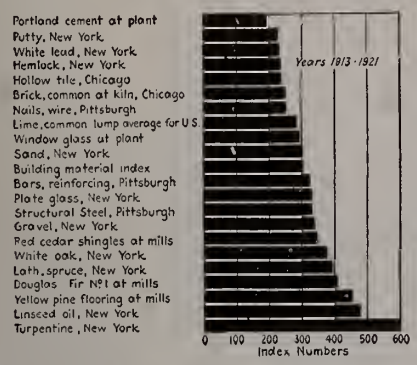


Fig. 5.—Peak prices of materials, 1913 to 1921. Maximum wholesale prices of building materials by index numbers based on 1913 average as 100.

to the producer in the case of the iron industry would be 10 to 20 per cent. a year profit, while in the cement industry the same capital would produce only 5 per cent profit."

Analysis of average Price

The detailed presentation of this analysis would vary with the cost accounting system used by each company. Fig. 3 shows in detail the various individual elements of cost in a representative plant.

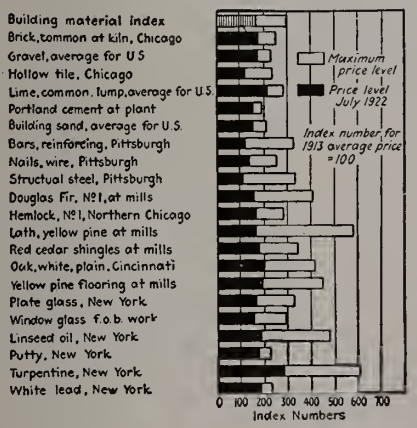

Building material index
Brick, common at kiln, Chicago
Gravel, average for U S
Hollow tile, Chicago
Lime, common, lump, average for U S
Portland cement at plant
Building sand, average for U S
Bars, reinforcing, Pittsburgh
Nails, wire, Pittsburgh
Structual steel, Pittsburgh
Douglas Fir, No 1, at mills
Hemlock, No 1, Northern Chicago
Lath, yellow pine at mills
Red cedar shingles at mills
Oak, white, plain, Cincinnati
Yellow pine flooring at mills
Plate glass, New York
Window glass f.o.b. work
Linseed oil, New York
Putty, New York
Turpentine, New York
White lead, New York
Maximum price level
Price level July 1922
Index number for 1913 average price = 100
0 100 200 300 400 500 600 700
Index Numbers

Fig. 6.—Relative prices of materials for July, 1922. Wholesale prices of building materials by index numbers based on 1913 average as 100.

Fig. 4 shows the four principal elements as shown by the records of 17 companies in Eastern United States from 1913 to 1921 inclusive.

It is well to bear in mind that the price per barrel as publicly quoted is a delivered price, and includes freight, cost of sacks and dealers' profit.

In Fig. 5 is shown the peak of prices in building materials between 1913-1921. Cement has the best record of all. Fig. 6 shows where cement stands to-day in relation to other building materials. Prices are much lower to-day than at the peak although the cement peak was not nearly as high as the general commodity peak.

Fig. 7 is of interest as it shows the increase in the consumption of cement since 1880 and the decrease in price, the seasonal and yearly fluctuations being eliminated.

In Fig. 8 is shown the true price of cement as established by Mr. Edwin C. Eckel, formerly of the U. S. Geological Survey. The true price is secured by dividing the nominal or money price for each year, by the average commodity price index-number. This curve shows that technical improvements and economies have permitted a decrease in the price of cement as compared with other commodities for many years. Since 1910 cement prices have followed closely to the average as further economies in production have not been possible.

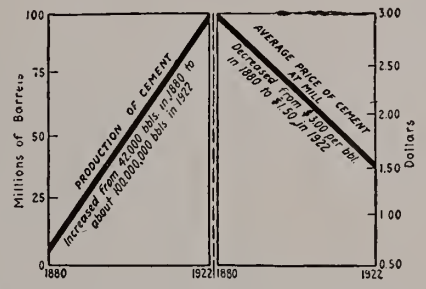

Millions of Barrels
Dollars
PRODUCTION OF CEMENT
Increased from 42,000 bbls. in 1880 to about 80,000,000 bbls in 1922
AVERAGE PRICE OF CEMENT AT MILL
Decreased from $1.500 per bbl. in 1880 to $1.50 in 1922
1880
1922

Fig. 7.—Output compared with price, 1880 to 1922. Data from 1880 to 1921 inclusive, from United States Geological Survey. Figures for 1922 estimated.

From whatever point it is considered the price of cement is exceedingly low.

As is stated by Mr. Burch in conclusion: "Considering the enormous amount of capital required to be invested, the rapid rate of plant deterioration and consequent high cost of upkeep, the multiplicity of operations through which the rock goes from the time it is quarried until portland cement is produced,

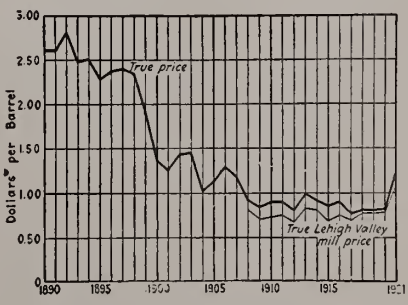


Fig. 8.—True price of Portland Cement. Cement prices from 1890 to 1921 expressed in terms of other commodity prices, thereby eliminating fluctuations in currency value.

the care required in grading, blending and testing to produce a uniform product meeting exacting specifications—considering all of these things—the real cause for wonderment is that cement should be the cheapest manufactured building material."

The Elevator Operator

EMPHASIZES SERIOUS EFFECTS OF GRAIN CONGESTION ON EXPORT TRADE

Fort William.—The strangulation of the grain handling system in channels east of the lake ports of Fort William and Port Arthur is crippling Canada's grain export trade, striking directly at the farmer and indirectly at the prosperity of the whole country, says the Fort William Times-Journal in a recent issue. Thus is summarized the immensely serious problem confronting the Dominion by grain export houses here who already report a falling off in purchases at the seaboard. With the greatest crop in history on its hands, and a congestion along the line of communication so marked that grain is piling up here at the rate of a million bushels a day, there is danger that the trade will be unable to sell what has been purchased. At a time when the world is prepared to buy from Canada, when the natural market is available, transportation is unable to deliver at a rate in keeping with the volume to be sold.

Shipper Faces Loss

New York will buy, but shippers here hesitate to try and deliver. They cannot get a guarantee against losing money on shipments. Prices are based on seventeen cents a bushel rate to the seaboard, via Buffalo—but the bar lies at Buffalo. The merchant making delivery, who charters the vessel to carry his cargo from this port, must pay the demurrage charge of $1,000 a day to the vessel owner if the carrier is held up at Buffalo more than 72 hours. Consequently he is wary of taking orders. Here is an instance that occurred recently. The N. M. Patson Grain Company received an enquiry for a cargo of No. 2 Northern from New York at a good figure. It had to be turned aside because the problem of delivery was too great.

It would seem as if an ugly fate were conspiring to place impediments in the way of Canadian grain marketing, for at a time when tonnage is urgently needed for grain carrying, there is also a heavy demand for ships to move ore on the upper lakes. Owners of bottoms find it profitable to keep their vessels in this trade because of the quick handling, and the grain trade is thus deprived of a certain amount of lake tonnage. Add to this the car shortage. It could hardly be called a shortage as compared with the demand of former years. But in view of the tremendous yield out west there is a crying demand for the use of an unprecedented number there that is having its effect here. Unusual through the necessity, shippers are willing and anxious to pay the additional cost of sending grain all-rail. But the railways limit the number of cars. Stringent orders against more than fifty cars a day leaving the lakehead for the east are being enforced by the C.P.R. This number is being apportioned equitably among the elevators. Even this avenue is restricted further, because the railways have ordered that no Canadian cars may cross into the United States, so that New York deliveries by this method are ruled out.

PARRISH & HEIMBECKER APPLY FOR LICENSE TO OPERATE ELEVATOR

Fort William.—Application for a license to operate their new elevator in Port Arthur was made recently by the firm of Messrs. Parrish and Heimbecker, of Winnipeg. The new house, construction details of which appeared in "Canadian Milling & Grain Journal," issue of Sept. 15, 1922, page 25, is almost ready to commence operations and their license will be granted in time for them to begin work at the earliest opportunity.

The new elevator plant of the Parrish and Heimbecker Company, which will begin handling grain this fall will not be completed until next summer.

The storage plant at present consists of six bins. Next summer it is the intention to increase this number to 36 bins. The construction of the additional bins was provided for in the original plan, but it was the company's desire to share in the handling of this year's crop, so construction was rushed on the work-house and first storage unit.

OSTRANDER CO. OF WINNIPEG, MAY TAKE OVER DAVIDSON & SMITH ELEVATOR

Fort William.—Under license issued recently by the Board of Grain Commissioners operation of the Davidson and Smith stock feed mill and elevator, near the Neebing river in Fort William, may be carried on by the B. J. Ostrander Company, Limited, of Winnipeg.

Mr. Ostrander will be in Fort William shortly and pending his arrival there is no one in Fort William who is prepared to make any predictions as to details of future operations. The Ostrander Company was at one time a Davidson and Smith subsidiary company.

The mill and elevator are said to be among the finest of their kind in Canada. The mill building was erected to house the plant of the McKellar Bedding Company, Limited, which suspended operations some years ago. The elevator is said to be the last word in the hospital type. Under Davidson and Smith direction, Mr. S. King was resident manager. Mr. King said recently that the Ostrander Company would probably assume control shortly.

PROPOSE ERECTION OF NEW $500,000 GRAIN ELEVATOR AT VANCOUVER, B.C.

Vancouver, B.C.—If the city's charter will permit it, and the electors endorse the expenditure by the city of $500,000 towards the cost, Vancouver will have another grain elevator next year to help handle the grain shipment overseas. Alderman F. H. Woodside at a recent meeting of the City Council gave notice of a by-law to be submitted to the people next week for the expenditure of half a million dollars as part of the cost of a grain elevator of from 500,000 to 750,000 bushels capacity. The balance of the amount necessary to build and equip the structure could be raised among the business men of the city, the alderman stated.

The Future Development of the Country Grain Elevator

(By a Special Correspondent.)

To those who have been privileged by extensive travel, and, also, more especially to those whose work it is to in one way or another supervise the operation of country elevators, the thought has no doubt frequently occurred how inadequate is the present system of country elevators to properly handle the enormous traffic of the prairie provinces. A few years ago thought centered upon railroad facilities for moving the crop to terminals, but the past two years have seen an improvement in rail movement which is nothing short of phenomenal. The country elevator system is such, however, that it cannot keep pace with the increasing efficiency of railroad organization. The average elevator of 30,000 bushels capacity is a fixed unit, and provides for the handling of grain at a speed which the railroads are showing their ability to cope with. The next speed movement must come from an improved country elevator system.

Typical West Country Elevators

The dominant idea in country elevator construction seems to have been, until quite recently, to erect buildings merely, rather than standard, up-to-date, rapid grain-handling structures. All country elevators should be provided with motive power of approved type, capable of driving the elevator machinery under continuous full load, without breakdown. They should be equipped with automatic wagon dump, built to drop the heaviest wagon or sleigh loads. The receiving pit to be of at least 300 bushels capacity. The elevator leg to be built of maximum carrying capacity, so that each load of grain received can be handled within three minutes, under pressure.

It is important that the elevator machinery, particularly that situated beneath the work floor, be so installed as to give the operator the maximum of access, and thus reduce to a minimum the liability to fatal accident. A desirable adjunct, which elevator companies have almost entirely lost sight of, is that all bins be completely hoppered, thereby eliminating unnecessary labor. It seems to be the prevailing idea to effect economy by constructing flat-bottomed side bins, rather than increase the rapid-handling facilities of the plant. Surely improvements which aid the elevator operator toward the success of his work are more effective of true economy! The country elevator of to-day should be an up-to-date plant, capable of handling 1,500 bushels of grain per hour, in or out, and that elevator which is built to take care of business at this rate is the one that is bound to pull its full share of grain from its district. It is puerile to deny that farmers are not interested in improved elevator systems. Farmers are as much interested in the scientific development in country elevators as they are in the price at which they sell their grain. We pride ourselves in Canada that our terminal elevator system is the finest and most extensive in the world, but it is high time that the country elevator system received the attention it needs. In past years the construction of elevators appears to have been in the hands of those who knew little about the successful operation of the buildings they erected, and still less about the grain business itself. The enormous repair bills which elevator companies continue to pay will amply prove the truth of this assertion.

As a sequel to the placement of insurance risks under the control of grain trade organization, it is to be hoped that, before long, the question of standardized construction of country elevators will be similarly considered.

GRAIN SHIPMENTS CREATING RECORD

In spite of congestion of grain at lake and bay ports and the consequent hampering of shipments to Montreal, 1922 exports to date are well ahead of those of last year, and will undoubtedly far exceed them by the end of the present season. Since the opening of navigation the harbor elevators have handled over 100,000,000 bushels and the Grand Trunk elevator 29,224,421, making a total for the port of 129,000,000 bushels, as against 123,540,114 for the same period last year.

Heat As a Method of Controlling Mill Insects

The most practical and effective method known to control all classes of mill-infesting insects is in the application of high temperatures and this method has been so developed that it is recognized not only throughout this country but also in several foreign countries as the most effective, practical and inexpensive of all treatments, and has the added advantage of being absolutely safe. A temperature of from 118 degrees F. to 125 degrees F. in all parts of the mill is sufficient to kill all stages of every mill-infesting insect, and a mill with sufficient radiation to heat it during winter to 70 degrees F. without the heat of the running machinery can be heated readily in summer to a temperature of from 118 degrees F. to 125 degrees F.

Steam Heat Most Efficacious.

Steam heat is the most satisfactory heat for raising mill temperatures to the killing point. One square foot of radiation is usually sufficient to heat from 50 to 100 cubic feet of space. In a five-storey building one square foot of radiation to each 50, 60, 75, 90, 110 cubic feet of space for the first, second, third, fourth and fifth floors, respectively, is suggested. If a steam pipe is used for radiation, the 1¼-inch or 1½-inch is recommended as most practical. The amount of radiation surface per linear foot and the linear feet of pipe per square foot of radiation surface for pipes of varying sizes are as follows:

Size of pipe in inches	Radiating surface per linear foot.	Linear feet of pipe per sq. ft. of radiating surface.
1	0.346	2.9
1¼	0.434	2.3
1½	0.494	2.0
2	0.622	1.6
2½	0.753	1.3

The steam pipes should be located near the floor and arranged to give equal distribution of heat. There should be water traps to draw off all accumulations of water in the pipes. To take advantage of the heat in the machinery, begin heating the mill immediately after shutdown. The steam should be turned on with from twenty-five to fifty pounds pressure. The radiation pipes or radiators should be free from dust. Thermometers should be placed at different points on each floor, that the temperatures may be readily ascertained. Time must be taken to reach the desired temperatures and the temperatures should be maintained for several hours to allow the heat to penetrate all infested parts. By beginning the heat process directly after shutdown Saturday evening and continuing until Sunday night, there will be no loss in running hours. Do not attempt to heat on a windy, cold or rainy day.

Heating mills as recommended for the control of mill pests will not injure any of the mill structure or equipment, and it is recommended by several of the largest mill insurance companies as the safest method.

An Erroneous Belief.

There has persisted among many millmen, as well as transportation men, and even consumers, the belief that the egg or "germ" of insects is within the grain at the time it enters the mill and that it passes uninjured through the milling process to the dormant stage in the finished product until such times as conditions of warmth and moisture favor its development. This belief is not founded upon facts. The destructive insects that infest grain or flour or any cereal product lay eggs too large to pass through the grinding process without being crushed. Moreover, they are so large that they cannot pass through the meshes of No. 10 XX silk bolting cloth. Thus flour bolted through a No. 10 XX, or finer, bolting cloth is entirely free from any stage of insect infestation as it comes from the bolting machines, providing the bolting machines and flour conveyors are free from infestation.

If this flour is sacked in bags upon which no insect eggs have been laid or in which no insect larvae or adults are present and is stored in a warehouse in which there is no infestation, it will leave the mill free of infestation. If such flour shows infestation by the time it reaches the consignee or the consumer, it has become infested while en route, or stored in the grocery warehouse, or in the kitchen bin.

In fact, to guarantee flour and cereal products leaving a mill to be free from infestation is so entirely within the bounds of reason that one wonders if it is right to permit certain millers to ignore insect infestations and put upon the market products that are invariably infested. Does not this shiftlessness and carelessness reflect upon the honest millers and bring them and their industry into bad repute?

FRANCE CONTRACTS FOR 25,000,000 BUSHELS OF CANADIAN WHEAT

Paris.—The recent collapse of the franc in the London market is causing uneasiness in financial circles. It is feared that the downward movement is likely to continue. Experts would not be surprised if the record low of April, 1920—67.45 francs to the pound sterling—were exceeded, especially in view of sterling's progress towards parity. Considerable strengthening of the dollar is also anticipated.

In some quarters the attempt is made to saddle the blame for the franc's decline on British Treasury operations. It is asserted that francs have been unloaded to buy dollars to meet British interest payments to the United States government. It is generally held, however, that the French budget situation, plus her requirements for raw materials, at rising prices, suffice to explain the weakness in francs. Contracts have been closed for 25,000,000 bushels of Canadian wheat. French mills have orders six months ahead, and their stocks are low.

OCEAN RATES ON FLOUR REDUCED

Montreal steamship agents recently issued an announcement to the effect that the ocean rates on flour from Canadian ports for December and January shipments has been reduced to 22c per 100 pounds, the rate from Montreal for the balance of the season remaining at 25c per 100 pounds. These rates apply on shipments to U.K. ports only.

Elevator, Mill & Personal Notes

Meaford, Ont.—The Georgian Bay Milling and Power Company plant, which supplies the power for the town, has been temporarily closed down pending the outcome of negotiations between the company and the Hydro Power Commission in regard to the supply of power for the municipality.

Toronto.—The Toronto milling trade has been advised that a flour mill is being established at Stettler, Alberta, by Mr. William Drews. The plant will be known as the "XXth Century Mill", and will have a capacity of fifty barrels. Electric energy will be used.

Fort William.—Mr. R. C. Harvey, who introduced a system of sheep feeding on elevator screenings here last year is repeating his experiment this season. A total of 20,000 sheep will be fattened between now and the spring.

Winnipeg.—The Northland Elevator Co., Ltd., has been incorporated with capitalization of $3,000,000.

Messrs. Parrish & Heimbecker, Limited, one of the well-known and old-established commission houses of the Winnipeg Grain Exchange, are floating a $200,000 6½% serial ten year first mortgage bond issue through the Minnesota Loan and Trust Company. A modern fireproof concrete 300,000 bushel terminal elevator will be built at Port Arthur from the proceeds.

The Appleton Car Mover Company, Appleton, Wis., are opening a plant in Welland, Ont., to take care of their increasing Canadian business. The organization will operate under the name of the Canadian Advance Car Mover Company, Ltd.

Sir Siviswamy Aiyer, K.C.S.I., leader of the National party in the Legislative Assembly of India, and member for India of the League of Nations, was a recent visitor to the Winnipeg Grain Exchange. The distinguished visitor was introduced by Mr. J. B. Craig, the president.

Mr. O. F. Hartman, flour merchant and broker, Produce Exchange, New York City, was a recent visitor in Montreal.

Mr. N. M. Paterson, the well-known Fort William grain merchant and elevator owner, is one of the most enthusiastic radio amateurs in the grain trade. Mr. Paterson's installation at his home on Archibald St., Fort William, can pick up radio broadcast services from all over the continent.

Mr. W. D. Euler, M.P., for North Waterloo, accompanied a deputation of millers from Kitchener, Ont., who went to Ottawa recently, to protest against the discrimination existing in the matter of freight rates.

Mr. J. G. Wolverton, of the Wolverton Milling Company, Ltd., Wolverton, Ont., was a recent visitor to Toronto.

Mr. W. J. Baldwin, a well-known miller of Aurora, Ont., was a recent caller on the milling and grain trade in Toronto.

Mr. George Shirk, of Messrs. Shirk & Snider, Bridgeport, Ont., called on the grain trade in Toronto recently.

Mr. Moreing, manager of Messrs. Taylor & Bournique, grain dealers, Buffalo, N.Y., was a recent visitor in Toronto.

Mr. J. H. Charles, of Messrs. Charles & McRostie, flour and grain dealers, C. P. R. Building, Toronto, is on a business trip to Port Arthur, Duluth, Minneapolis and Chicago.

Mr. W. H. Anderson, of the Anderson Grain Company, Inc., Buffalo, was in Toronto on business recently.

Mr. F. J. Ludwig, vice-president of Messrs. Charles M. Cox & Co., feed and grain merchants, Boston, Mass., was a recent caller at the office of Messrs. Vannatter & Ham, Limited, Dominion Bank Building, Toronto.

Mr. Fred J. Anderson, president of the British Empire Grain Company, Ltd., Winnipeg, and one of the most popular members of the Winnipeg grain trade, was a recent visitor in Montreal.

Mr. Walter M. Hislop, grain broker, Board of Trade Building, Montreal, is visiting England and the Continent on business.

Mr. J. L. Cisneros, flour broker, Produce Exchange, New York City, was introduced on 'Change while in Montreal on a recent business trip by Mr. Chas. Ritz, eastern manager for the Robin Hood Mills, Ltd.

Chief Commissioner Leslie H. Boyd, K.C., of the Dominion Board of Railway Commissioners, Fort William, accompanied by Commissioner Robinson and Mr. R. Hetherington, manager of all government terminal elevators, are at present on a tour of inspection of all government terminal elevators between the head of the lakes and the coast.

WANT EMBARGO ON CANADIAN GRAIN

Washington.—Demands from western grain shipping interests supported by the American Farm Bureau Federation, for an embargo on the shipment of Canadian grain through the United States during the present congestion of traffic, have been taken under consideration by the Interstate Commerce Commission. It is likely that a decision or at least a response to the protesting groups will be given by the commission soon, but it is considered doubtful whether the steps requested will be taken by the commission.

PROMOTION FOR LINK-BELT OFFICIAL

Mr. W. W. Sayers, of the Link-Belt Company, 910 South Michigan Avenue, Chicago, has been promoted to the position of Chief Engineer of the Company's Philadelphia Works and Eastern operations.

For many years Mr. Sayers was a popular representative of the Company in their Chicago territory, in the lines related to power house machinery, coal storage, peck carriers, crushers, etc., and later in charge of the locomotive crane department.

Mr. Sayers' headquarters will be at the Philadelphia office for the future.

Brief News Despatches From Leading Grain Centres

WANT GRAIN CLEANED AT CALGARY

Vancouver.—As a temporary method of combating the want of elevator facilities in the port of Vancouver, members of the Grain Section of the Merchants' Exchange have decided to ask prairie farmers to have grain cleaned in Calgary before shipping to that port. The grain commissioners in Fort William will also be requested to enforce their order of last year calling for all grain shipped over the Canadian Pacific Railway to the west coast to be cleaned at Calgary.

The Board of Grain Commissioners following its promised sitting at Winnipeg recently, for the purpose of hearing an application of grain growers of Saskatchewan, for abolition of the mixing privilege in connection with terminal elevator business at Fort William, announced that it would take the matter under consideration and render a decision shortly. The chairman's concluding remarks intimated that it would be necessary to amend the Canada Grain Act in order to achieve the purpose of those who would abolish terminal mixing by grades.

SASKATCHEWAN LEADS IN GRAIN LOADING

Moose Jaw.—Out of a total of 44,817 cars of grain loaded at country elevators on C. P. R. lines in the three prairie provinces, between September 1st and October 15, 25,500 cars were loaded in the Saskatchewan district. In other words 56.24 per cent. of cars loaded in the three western provinces have been loaded in Saskatchewan.

TO INVESTIGATE GRAIN GRADING

Winnipeg.—Following a request to the Provincial Government from grain growers of the Goodlands-Waskada district, in Southern Manitoba, Hon. D. L. McLeod, provincial secretary, has asked the Board of Grain Commissioners to investigate reports that grain buyers at country points have been instructed to grade no wheat higher than No. 3 northern, and also that the grain importation department at Winnipeg is unfairly grading and docking grain.

Farmers in the Waskada district have held several indignation meetings, and Mr. Matthew Snow, one of the grain commissioners and chief inspector, has left Winnipeg to investigate.

MUCH GRAIN LOST IN RAIL WRECK

Port Arthur.—Fifteen thousand bushels of the eastern Canada wheat crop were spilled over the right of way when some eighteen freight cars were smashed and the track was torn up for several yards in a rear-end wreck at Baird, Ont., on the Canadian National Railway recently.

FLOUR TRADE OF THE AZORES

Decreasing wheat crops from year to year in the Azores has forced continued imports of flour, largely from the United States. As a precautionary measure against possible combinations by importers and dealers, the government is doing the importing and delivers the flour to licensed bakers exclusively. Shortage of farm labor and the consequent decreased acreage has limited the local production of wheat to the point where flour must now be imported.

MAY TAX TRADING IN FUTURES

Winnipeg.—Trading in futures on the local grain exchange may be taxed by the Manitoba Government if a measure now being considered by Hon. F. M. Black, provincial treasurer, is sanctioned by the legislature when it convenes. A proposal has been made to the minister to place a tax on the daily clearings of the Grain Exchange and it is estimated that from this source a revenue of not less than $250,000 could be obtained.

The Provincial Treasurer, with the province going behind $3,500 each day, is faced with the problem of increasing revenue through taxation and he has under consideration several new measures which would increase the income of the province $550,000 annually. A suggested new tax is one on gasoline sold throughout the province. This was considered by the Norris administration but was not adopted. A tax would be imposed on each gallon of gasoline sold and it is estimated revenue from this source would total $200,000 yearly.

TO TEST GRAIN FUTURES ACT

Chicago.—Lack of proper co-operation by the United States department of agriculture in the consideration of national legislation is charged in a report by the legislative committee of the principal grain exchanges of the United States.

The report was a factor in the filing of a petition recently by the Chicago Board of Trade for an injunction restraining the government from enforcing the grain futures act, and an order preventing enforcement of the law pending a hearing of a petition. This action is the first step on the part of the grain exchanges to test the constitutionality of the law.

ORIENT REQUIRES CANADIAN WHEAT

Vancouver.—Vancouver grain handlers are looking for a good demand to come from the Orient this year for Canadian wheat. Inquiries are said to be active and already some 8,100 tons of wheat have been booked for shipment to the Orient, as against none at this time last year. Shipments of wheat generally through that port are being made on a good scale and it is estimated that some 825,000 bushels will be shipped from Vancouver during the current week. The movement to the United Kingdom so far has been good. Bookings so far to Great Britain total 5,346,507 bushels while last year's shipments amounted to over 4,000,000 bushels.

WHEAT MIXING AND LOWER GRADING

Regina.—To ascertain the extent to which mixing of wheat results in the lowering of grade, the executive of the Saskatchewan Grain Growers' Association have decided to endeavor to get a line on all grain which has been handled through private terminal elevators at the head of the lakes this season.

GRAIN CONGESTION IS GENERAL

Superior, Wis.—Congestion of grain in the elevators at Buffalo, due to the inability of eastern railway lines to transport it to the Atlantic seaboard, has stagnated the grain movement here.

THE PRACTICAL MILLER

CAUSES OF LOST POWER IN THE MILL

The three main causes of loss of power in the flour mill are transmission of power, the conveying of products, and bad grinding. The first two, speaking generally, are unavoidable, but it is in the hands of the miller to see that no bad grinding occurs in his mill.

Dealing, firstly, with the loss sustained in the transmission of power, in an average mill driven by steam, there is a loss of efficiency at the engine, with the rope drives, and at the roller mill pulleys. Engine efficiency is 90 per cent. of the indicated horsepower, rope drives 95 per cent. of the I.H.P., and the B.H.P. at the pulley of the roller mill is 77 per cent. of the I.H.P. In the latter case, it might be as low as 70 per cent. if the drives are not up to standard. All these would be lower if the shaftings were too long and insufficiently supported by good ring (self-oiling) bearings, and the ropes too tight, which would cause excessive friction on the bearings with resultant loss of power.

Too Many Conveyors Necessary

In overcrowded mills, it is often necessary to have too many conveyors. A well-planned mill requires about .65 I.H.P. per sack for conveying purposes, .4 for the mill proper, and .25 for the screen room. It has been found that the range is from .60 as the minimum, to 1.5 as the maximum, hence this is an important factor, and mechanical conveying should be avoided wherever possible.

The rollerman is responsible for the rectification of bad grinding and has to contend with difficulties such as dull break rolls and badly conditioned wheat. Dull rolls always usurp more power than sharp rolls. It is found that the difference in power consumed between blunt and sharp rolls may be as much as one H.P. for one pair of 60 in. rolls.

Another factor governing power consumption is dust collection. It is found that a suction collector takes considerably more power than the pressure filter type.

The condition of wheat going to the break rolls counts for much in this question. The ideal mixing is that with an even temper, which takes comparatively little breaking down, consistent with good results. Too heavy grinding on rolls is a common cause of the loss of power, but this is not necessary or advisable with a well-conditioned mixing.

In crowded plants there is always a liability to over-feed machines, and centrifugals and purifiers are called upon to do more than their share of work. This leads neither to efficiency nor economy in power.

Some Practical Remedies

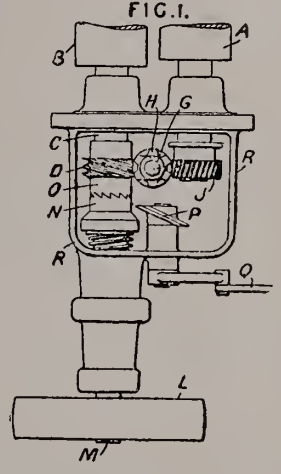
Good chain or leather drives should be used wherever possible. The latter kind should be neither too tight nor too slack, and should not require belt dressing to make them grip, as it spoils the belts, wastes power, and contaminates bearings. Cross drives are at times unavoidable, but on the question of friction should not be used too liberally. Bearings should be kept in repair and well oiled. Roller bearings undoubtedly save power, and it is advisable to use them wherever possible. Ropes and their pulleys should be kept at their highest efficiency and occasionally greased. Engines should be periodically overhauled for the keeping up of their maximum efficiency.

As by far the most power of a mill is consumed on the roller floor, it is there where all attempts at economy should be made. Modern roller mills are able to deal with more stock and consume less power than formerly was the case. Rolls should be well fed without overcrowding, and the rollerman should help his employer by keeping his eyes upon the numerous small points which, grouped together, are invaluable as power savers.

Milling and Grain Patents

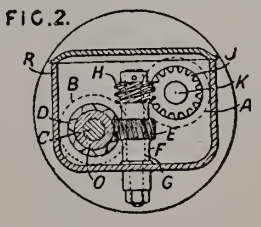
The following invention, which has been designed by Mr. P. Turner, St. Peter's Iron Works, Ipswich, England, relates to feeding devices for roller mills of the kind in which two feel-rolls mounted in different vertical and horizontal planes, with the

FIG. 1.



lower roll driven faster than, and through worm gear from the upper roll, are employed. A worm D on the shaft C of the lower roll B meshes with a worm-wheel E on a sleeve F carried by a short shaft G, and a worm H secured to the sleeve meshes with

FIG. 2.



a wheel J on the shaft K of the upper roll A, the shaft G being secured to the bottom of a gear-box R in which the worms D, H and the wheels E, J are contained. The shaft C is driven through a clutch N, O from a shaft M carrying a pulley L, driven from the extended end of the bottom roll of the mill. The clutch is operated by means of a cam P operated by a lever Q which is connected to the lever that separates the grinding-rollers.

THE PRACTICAL MILLER

PREVENTIVE MEASURES FOR CONTROL OF MILL INSECTS

Since a large proportion of insect infestation in flour mills and warehouses is directly traceable to a disregard to cleanliness, it is very important to keep the entire plant scrupulously clean by sweeping up all accumulations of flour and meal on the floors, in the corners, under machinery, and in all other places where it may find lodgment. This material should be removed from the mill and disposed of in such a manner as not to be brought back into the mill.

About every six weeks during the summer, all accumulations of flour or meal should be brushed out or removed from the elevator booths and flow conveyors, and destroyed by burning. Before removing these accumulations, it is well to go over the elevator legs with a spout maul and jar loose the infested accumulations.

Keep all Floors Swept

In flour warehouses the floor should be thoroughly swept and all accumulations removed after each movement of flour. All walls and ceilings of the mill or the warehouse should be smooth, so as not to afford hiding and breeding places for the insects. These walls and ceilings should either be painted or be kept whitewashed.

In order that infestation be avoided in the dark corners and other places in the basement, a liberal amount of air-slaked lime should be used. This lime not only will act as a repellent for the insects, but will tend to destroy some of the objectionable odors and sweeten the air.

Buildings should be constructed so as to avoid damp, dark places. Floors and walls should be joined so that accumulations along the edges and in the corners can be easily swept out. Floors of all basements should be cement, and all walls should be smooth.

Properly Placed Machinery.

All machinery should be placed high enough to allow thorough cleaning and brushing beneath it. As far as practicable, the bottoms of all flour conveyors should be metal, and should be rounded in such a manner as to allow the least amount of flour or meal to accumulate along the sides and at the ends. The hoppers of the rolls should be constructed of cement, and in such a manner as to allow no flour to accumulate in inaccessible places.

Sacks or bags should not be stored in packing rooms or in any part of the mill where flour or meal may collect on them and thus afford breeding places for insects. The sack room should be a separate room from any part of the mill.

Since the handling of second-hand sacks affords one of the best means of infesting a mill with several of the most serious mill insects, the sacks should be fumigated or treated before being brought into the mill, or the practice of handling them should be stopped at once.

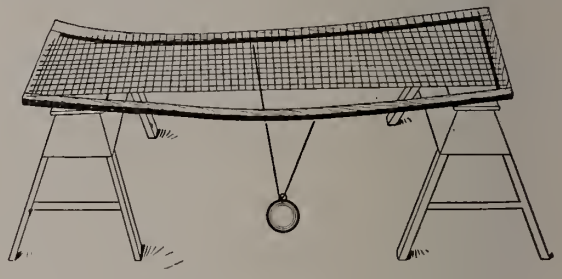
The common sprocket chain is very adaptable where the speed is low and a positive drive is required.

WATER COMPLICATED IN ITS USES

The word "water" and the simple chemical formula of the pure liquid H_2O give no idea of the complications connected with the use of water. Most people know that the brewing of beer is made or marred by the water used, the effect of the water on malt being largely determined by traces of chemical substances dissolved in the water, but it is not so generally appreciated that these same chemical impurities dissolved in water affect its value for bread-making. In fact, not the least of the many uses of acid flour improvers is the part they play in neutralizing the alkalinity of the water used, for very often water is alkaline because it has been treated with caustic lime to remove hardness. Alkaline water would have an injurious effect on untreated flour. Hard water contains a small percentage of calcium and magnesium sulphates amongst other inorganic substances, and these are not removed by the "softening" process and give rise to what is known as "permanent hardness" of water.

STRETCHING WIRE ON MACHINE GUARD

Here is an idea for stretching wire tightly on wooden roll guards. The wire is tacked as tightly as possible to both ends of the guard frame, the latter being laid across two trestles, and a weight



attached to it as shown. After the weight has hung long enough to sag the frame it is released and the frame springs back. The wire is immediately tacked on and will be found to be much tighter than before the weight was attached to the frame.

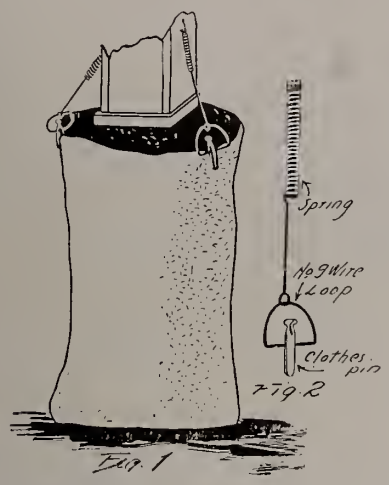
TRUSTEE'S SALE OF MILL

The milling plant of the St. Mary's Milling Co., Ltd.; one of the best of the Ontario mills; well situated in the town of St. Mary's, Ontario, on the tracks of the Canadian Pacific Railway, with private siding and inter-switching with the Canadian National Ry. (G. T. R.). Milling in transit. Hydro-electric power. In operation about three years. 700 bbls. capacity. Fine stone building. New and up-to-date equipment. Elevator, 40,000 bushs., cribbed and iron-clad. Track scale. Power shovel, car mover. Chopping mill, new. Water-power, stone and concrete dam. Good farming and dairy district. Inspection invited. Tenders asked. Highest or any tender not necessarily accepted. Apply to F. W. Raymond, authorized trustee, London. Ontario.

THE PRACTICAL MILLER

FOR HOLDING SACKS

Where sacks are held under spouts to catch small streams a holder like the one here shown is a great improvement over hooks or nails driven in the spout,



as the nails often tear the sacks. Fig. 2 shows details of this holder, Fig. 1 shows it in action.

AIR-TIGHT STORAGE FOR CEREALS

It seems that air-tight storage for the prevention of insect attacks on cereals is regarded as a new suggestion, due to research in war time by the Royal Commission in Great Britain on the subject of protecting grain from pests. The suggestion is not itself new, but the war time investigations have brought out a number of important facts.

It has been discovered, for instance, that nearly all insects are dormant at a temperature of 43 degrees Fahrenheit. This shows that cold storage is an element to be considered. Again, it has been shown that few insects can live in cereal products whose moisture is 20 per cent. below normal. This is an important proof of the value of dry storage.

Further, insects cannot live without a certain amount of oxygen; and carbon dioxide kills them. Now with wheat in store, it is well known that it throws off carbon dioxide, as the result of the "respiration" of the wheat, which breathes, so to speak. Men have died from carbon dioxide in vessels loaded with grain, by descending into the grain compartments after a long voyage before fresh air had been admitted. If there are weevil present in the wheat they also consume oxygen like the wheat and give off carbon dioxide. With air-tight storage it is only a question of time when the weevil will die of suffocation. Now as there is about 38 per cent. of air in a bin when the wheat is well packed, it is a question how long weevil and other insects will live in air-tight storage before they perish from lack of oxygen and excess of carbon dioxide.

But this whole question of air-tight storage was covered 40 years ago by patents granted to an American. Of course the patents have long since expired by limitation. They covered circular air-tight storage, pneumatic transfer of grain, and apparatus for exhausting air from the circular tanks.

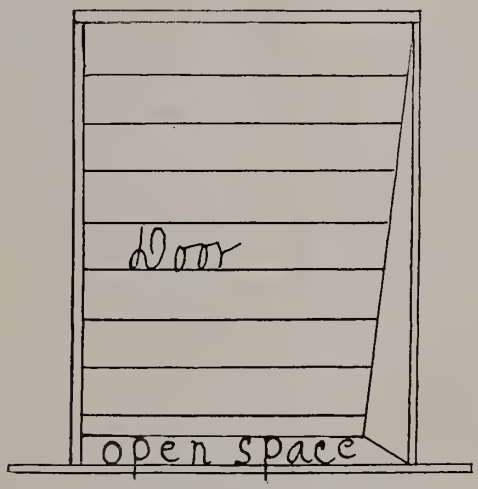
WANT ANTI-DUMPING LAW REMOVED

Requests that the Federal Government should approach the Government of South Africa, with a view to effecting the removal of the anti-dumping provisions now operating against Australian flour, have been made by a deputation representing the Victorian Millowners' Association.

The deputation pointed out that a valuable trade in flour was carried on between Australia and South Africa prior to the shipment of the faulty flour, milled from "B" grade wheat from the 1916-17 Pool. It was urged that an endeavor should be made to restore this trade.

IMPROVING BIN DOORS

Here is a style of door that is familiar to most millers. If the board shown is left out when building a new bin, or is taken out of old bins it makes possible at all times to get a sample of the contents of the bin, and further, it is possible at any time to insert a stick into the bin to relieve a choke or to sample the stock to ascertain if it is heating.



As a rule these doors are built about four feet from the floor so that the miller has to be something of a contortionist to get into and out of such bins. Why should not the door be made so close to the floor that a fat miller, if there are any fat ones (we have never seen any), can get through. Again, the door should be large enough for one to get in and out through with ease and comfort.

Cereal Chemistry Department

IN inaugurating under the above heading a new department which will be devoted to cereal chemistry, "Canadian Milling & Grain Journal" takes pleasure in announcing that all questions received from millers on any phase of cereal chemistry will be answered herein by Mr. S. J. Lawellin, president, and other members of the American Association of Cereal Chemists. Mr. Lawellin's position as head of the cereal department of the Milton Hersey Company, Limited, Paris Building, Winnipeg, Man., and his acquaintance with chemists in the Dominion, places him in an excellent position to handle these questions. Both questions and answers will be published in this column, and while no names will be given, all communications must be signed.

THE PRACTICAL MILLER

CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

WANTED MILL MACHINERY.—Advertiser can use small reel, about 30" x 48", also bran duster. Reply Box 127, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE.—Dust collectors. One No. 14 Perfection and one Cyclone style No. 6. Brand new. At exceptionally low prices. Also, few second-hand grinding mills, at bargain prices. Reply, International Agency, Room 416, St. Nicholas Building, Montreal, P.Q.

POSITION WANTED by flour salesman in the Province of Quebec. Excellent connections in Quebec city and district. Has had several years experience, and has represented a number of leading firms. Can furnish best references. Reply Box 130, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED.—Ex-miller with long experience wishes to rent 25-40 barrel mill. Reply Box 125, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—One 50-barrel Midget Marvel Mill, with Cleaner, Elevator, Heads and Boots, Belt and Buckets, Transmission. Guaranteed good condition. Reply Box 126, "Canadian Milling & Grain Journal", Phillips Place Building, Phillips Square, Montreal, P.Q.

WANTED—Position as Head Miller. Applicant has had twenty-five years' experience operating mills from 50 to 400 barrels capacity. Can furnish first class references. Reply, Advertiser, 222 Wychwood Avenue, Toronto, Ont.

MILL TO RENT — Constructed of brick, 45 by 90; also warehouse with holding capacity of three to four thousand bags of flour; storage bins; four double rolls, and full complement of machinery, in good condition. Situated on C. P. R. and G. T. R. Reply Box 129, "Canadian Milling & Grain Journal", Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED a reliable flour and feed dealer to furnish wheat for milling. Flour and feed from wheat supplied to be taken by dealer on commission basis. Quality of flour and yield guaranteed. Reply Arcola Mills, Arcola, Sask.

AGENTS WANTED to handle a high class Crude Oil Engine, suitable for Mills and Elevators. For full particulars write H. W., c/o "Canadian Milling & Grain Journal," Dubrule Building, Montreal.

IMPORTERS OF CANADIAN FLOUR AND GRAIN

D. T. RUSSELL & BAIRD
Limited

FLOUR, OATMEAL
— CEREALS —
PRODUCE & FEED

Head Office - 73 Robertson St., Glasgow
Also at London, Leith, Dublin
Cable Address: "Delight", Glasgow

STOLP & COMPANY
FLOUR & GRAIN IMPORTERS

EXPORTERS OF SEED & BEANS

Agencies at:
Wiborg (Finland), Christiania, Copenhagen, Bremen, Danzig,, Crefeld, Cologne, Frankfurt at Main, Prague, Vienna, Budapest.

HAMBURG AMSTERDAM

Cable addresses:
Ceresrose. Cleo.

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- FLOUR -
IMPORTERS

London - - England

Archibald Hamilton William T. Scott

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:: FLOUR ::
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70 Wellington Street - GLASGOW
CABLE ADDRESS "CALYPSO"

CANADIAN GRAIN, FLOUR AND FEED BROKERS AND COMMISSION DEALERS

Continuous
Grain Quotations Received
CHICAGO WINNIPEG
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Members
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Extensive Private Telegraph Wire Connections

Vannatter & Ham
LIMITED
SHIPPERS *and* DEALERS
Oats, American Corn
Millfeed, Winter Wheat
Flour and Standard Re-cleaned Screenings
718 DOMINION BANK BLDG.
TORONTO
CORRESPONDENCE SOLICITED

Phones { Office: Adelaide 3113 / Residence: Coll. 3184
T. F. HARCOURT
Grain & Commission Merchant
Dealer in all kinds of Western Canada and Ontario Grains and Mill Feeds also American Corn and Milling Wheat.
Private wires to all leading Canadian and American Markets.
ROYAL BANK BUILDING
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DAVID MAHAFFY
FLOUR AND MILL FEED
——— Wholesale ———
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MONTREAL

WINNIPEG

WESTERN OATS
Choice heavy white oats from best oat districts in Prairie Provinces.
Sacked or Bulk. Wire for Prices.
NATIONAL ELEVATOR CO., LIMITED
WINNIPEG

MILTON HERSEY CO., LTD.
(Established Over Thirty Years)
Comparative Baking Tests
Wheat Flour and Feed Analyses. Referee Work. Consultation on Milling Chemistry Problems.
Paris Building, Winnipeg, Man.

WE WANT YOUR NAME NOW
to be listed in the Free Milling Directory of Canadian Flour Mills, managers, superintendents, head and second millers, and engineers.
IF YOU WANT TO BE INCLUDED
We must have your name and other particulars on accompanying form. Kindly fill in and return promptly.

Superintendent .....
Head Miller .....
Second Miller .....
Name of Firm .....
Address .....
Daily Capacity .....
Power Used .....

THE PRACTICAL MILLER

The Question Box

With a view to making this department one of real service, "Canadian Milling & Grain Journal" cordially invites its readers to send in their problems to The Question Box. There are but very few millers or elevator operators who do not have worries in the proper conduct of their plants. It may be due to lack of experience or inability to trace cause and effect. The logical and sensible thing to do is to ask someone who may possibly know. Often he is not at hand, and still oftener the perplexed miller or elevator operator does not want to show his lack of knowledge. Under these circumstances he can address his inquiry to the craft through this journal. His name will not be divulged if he wishes to remain incognito. Someone is sure to reply who has had similar problems to meet or similar questions to ask. We guarantee to devote all the space necessary to the asking and answering of questions, so do not be backward in sending them in.

THE EDITOR.

QUESTION:—Will spring wheat, properly milled, produce a flour that is as fine or finer than that from winter wheat?

ANSWER:—The flours mentioned are each in a class to itself and would be rated first class in either case whenever either of the flours are used for their special purposes. The spring wheats are much stronger and are more suitable to the present method used by the bakers for making light bread. The winter wheats are better suited to pastry or biscuits.

EFFECT OF U. S. EMERGENCY TARIFF ON WHEAT DIFFICULT OF DEFINITION

Washington.—The emergency tariff law, containing a duty of 35 cents a bushel on wheat, has affected only the trade in northern spring wheat produced in the upper Mississippi and Missouri valleys in competition with Canadian wheat of the same variety, according to a formal statement made public by the United States Tariff Commission.

In explaining this statement the commission says:

"Large quantities of other varieties of wheat are exported from this country, therefore, an import duty has little effect upon their prices. There usually is a deficiency of domestic hard spring wheat for blending purposes, however, and to the extent that the emergency law reduced somewhat the Canadian imports of this variety of wheat, the duties had some effect on prices. England did not purchase the normal portion of Canadian wheat in 1921-22, with the result that many Canadian producers were forced to market their crop in this country over the tariff wall. How much lower the American prices would have been had Canadian wheat been admitted free of duty is uncertain.

In general, the effect of the emergency tariff was held by the commission to have prevented as great a fall in prices as might otherwise have come rather than to increase the value of the thirty commodities covered.

The Duster

The average life of a $5 bill is ten months through the country as a whole, and but eight months in dense centres of population.

Our share of the bill's life is about five minutes.

TO-DAY'S BEST STORY

Sunday school teacher to Johnny, who is showing inattention: "What is marriage?

Johnny: "I-I-It's a place of torment where some people have to go before they can get into Heaven."

A countryman with a local reputation as a vocalist attended a dinner, and was asked to sing. Although he had no music with him, and was as hoarse as a frog, he consented to try, but he broke down.

"Never thee mind, lad," said an elderly guest, trying to cheer him up; "never mind the breakdown, for thee's done they best; but th' fellow as asked thee t' sing ought to be shot."

Rufus Redd Dogg

"THER'S a whul lot 'f peepel 'n this neck 'f th' woods," observed Rufus to Toby Cripplegate, one of the elect of the corner grocery store club,"who ez obsessed with th' idea thet they kin dodge Fate. "They 'mind me f' th' yostrish thet runs his hed inta th' ground an' thinks 'cos he kain't see thet no wan kin see him. Pus'nally, I never opines t' say Howdy t' th' Old Boy till I meets him which 'll mebbe be time enough."

Encouraged by Toby's seeming acquiescence in his solemn dictum, Rufus continued. "Whut I sez ez right f'r I heerd tell 'f a shinin' example 'f tryin' t' make whut may not be won't be right 'n our midst so t' speak."

"Et seems thet Ed Grainey wuz 'n th' throws 'f his annuel threshin' when th' arrival 'f a son wuz announced t' him. A cupple 'f days arterwards th' threshers et Ed's passed on t' Curt Clement's an' b' th' great horned toad they wuz'nt workin' but a day 'r two ther' when Curt bekem th' proud poppa 'f a bouncin' girl."

"Th' p'int 'f me observashions," concluded Rufus, "lies 'n th' fact thet when Giff Heizer, who was just goin' t' start his threshin' heerd tell 'f whut hed heppened t' Ed an' Curt he tuk a quick decision t' stack his grain 'n post-pone his threshin' till th' weather wuz colder."

LAKE OF THE WOODS MILLING CO., LIMITED,

MAKERS OF

MANITOBA SPRING WHEAT FLOUR

GUARANTEED

NOT BLEACHED *NOT BLENDED*

MILLS AT KEEWATIN, PORTAGE LA PRAIRIE, MEDICINE HAT

CAPACITY 13,700 BARRELS DAILY

HEAD OFFICE, MONTREAL WESTERN OFFICE, WINNIPEG

LOCAL OFFICES:—
TORONTO, OTTAWA, LONDON, ST. JOHN, FORT WILLIAM, CALGARY, EDMONTON, VANCOUVER

CABLE ADDRESS:—"HASTINGS," MONTREAL. CODES:—A. B. C. 4th & 5th EDITIONS, 1901, RIVERSIDE

112 RECEIVING ELEVATORS IN MANITOBA, SASKATCHEWAN AND ALBERTA, CAPACITY 3,500,000 BUSHELS
TERMINAL ELEVATORS AT MILLS, CAPACITY 1,500,000 BUSHELS

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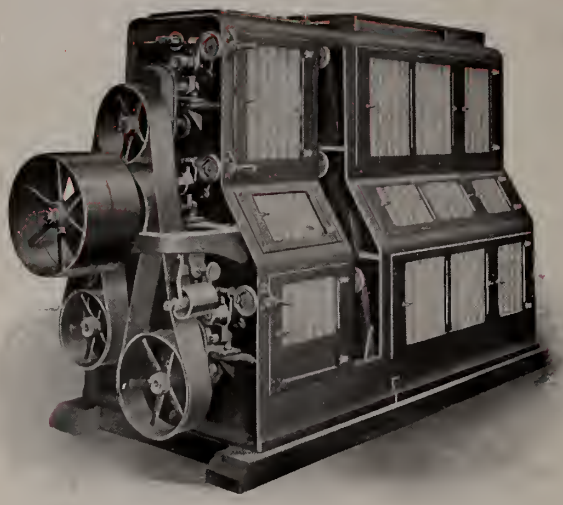
R. W. REFORD

MIDGET MARVEL MILLS

Saves Half the Power Bill



Increase Profits by Cutting Expenses

THE MIDGET MARVEL saves half the power bill. (It is quite generally admitted the MARVEL requires only half the usual amount of power.)

THE MIDGET MARVEL being self contained practically all machinery is on one floor under the eye of the operator. (No running up and down stairs.)

THE MIDGET MARVEL will doubtless permit you to run to full capacity even though your water power is insufficient for your present system.

However, the advantages of POWER, SPACE, and SUPERVISION are by no means all - - - - we recently sold one of our larger units to a miller with ample room and water power to run the numerous double stands of rolls with which his mill was already equipped. He found THE MIDGET MARVEL so efficient and satisfactory that he has no use for his other machinery.

Pollard Manufacturing Co., Limited

NIAGARA FALLS, ONT.

Western Office: 1206 Union Trust Building, Winnipeg, Man.

CANADIAN
Milling & Grain
JOURNAL

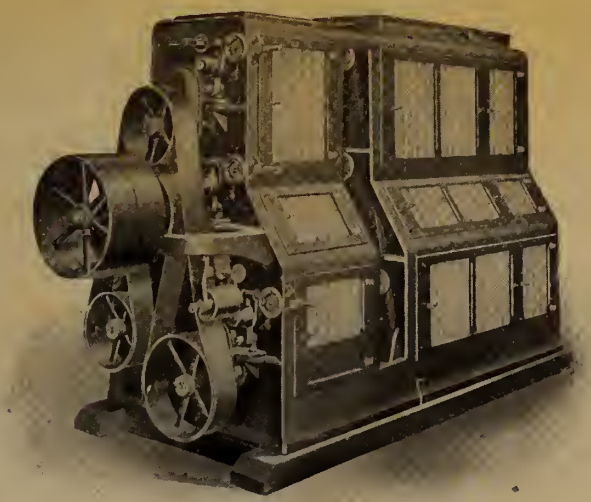
VOL. III MONTREAL, DECEMBER 1st, 1922 No. 21

SUCCESS
From a Milling
Standpoint

Economy in Power

(Only 15 H.P. required to run a 50 Bbl. unit.)

SUCCESS
From a Financial
Standpoint



All on the level—
no stairs
to climb

Makes Milling
a ONE MAN
BUSINESS

MIDGET MARVEL MILLS

Make this Mill the means to independence.
Many have already done so.

Made in Canada by

Pollard Manufacturing Co., Limited

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Western Office: 1206 Union Trust Building, Winnipeg, Man.

For the Good of Your Plant Install "PMS" Belting

Two principal factors enter into maximum power delivery: efficient transmission and continuity. "PMS" excels in both of these. By its greater adhesion to the pulley it gives a high percentage of efficiency. By its great strength it reduces break-downs and adjustments to the minimum.

On this basis, we claim it is the best for your plant--will you test our claims?

Manufactured exclusively by

Gutta Percha & Rubber, Limited

Head Offices and Factories, Toronto, Canada

Branches in all Leading Canadian Cities

LAKE OF THE WOODS MILLING CO., LIMITED,

MAKERS OF

MANITOBA SPRING WHEAT FLOUR

GUARANTEED

NOT BLEACHED *NOT BLENDED*

MILLS AT KEEWATIN, PORTAGE LA PRAIRIE, MEDICINE HAT

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The St. Lawrence Flour Mills Co.

LIMITED

CANADA'S MOST MODERN AND BEST EQUIPPED MILLS
MAKERS OF CANADA'S MOST POPULAR BRANDS OF FLOUR

Regal

A high quality bread flour sold in bags of 7, 14, 24, 49 and 98 lbs. and in barrels of 98 and 196 lbs.

Quotations on car lots requested.

⚜ *Fleur de Lis* ⚜

A high grade bread flour sold in 98 lbs. bags and in 98 and 196 lbs. barrels.

The baker's favorite from Coast to Coast.

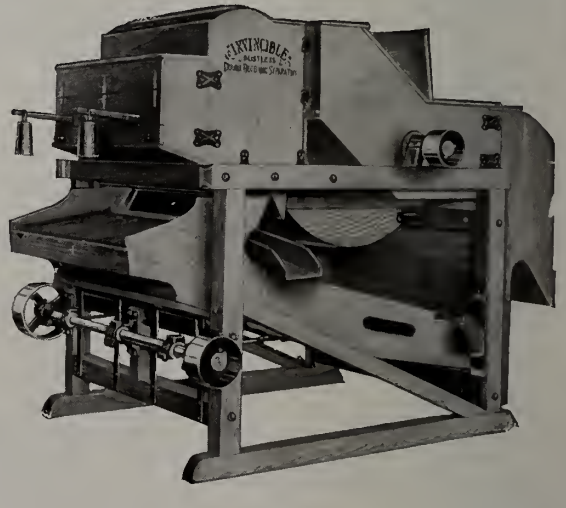
Offices & Warehouses: 1110 NOTRE DAME STREET WEST, MONTREAL, CANADA

The Value of a Name

When a shipper can advertise that all his grain is cleaned on an Invincible Separator, his possibility for expansion is not limited to any local circle of buyers.

The Reputation of Invincible Separators is world wide.

Specify this to your Mill Furnisher, Mill or Elevator Builder. Insist on an Invincible.

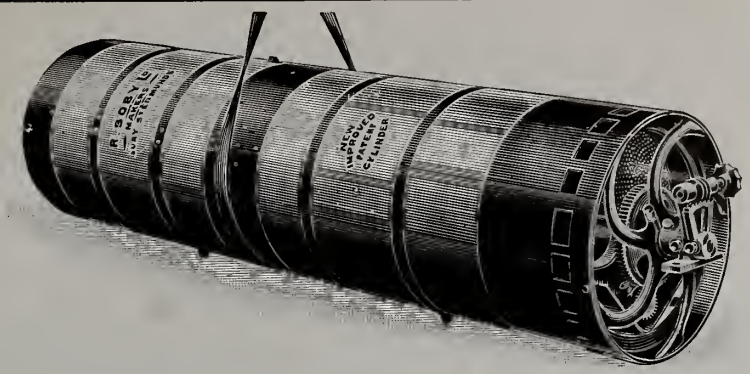


Invincible Grain Cleaner Company

Silver Creek - - New York

Builders of Quality Separators, Scourers, Packers, Magnetic Separators, Grain Dryers, Dust Collectors, etc.

With



BOBY'S INDENTED CYLINDERS

(The Only British Makers)

We Guarantee Separations!

BARLEY	OATS	CORN
BEANS	WHEAT	PEAS

Our Way is EFFICIENT & ECONOMICAL

Write us for particulars or send samples

Messrs. R. Boby, Limited
BURY ST. EDMUNDS - ENGLAND

R. S. GRIFFITH
225 BEAVER HALL HILL, MONTREAL
Canadian Representative

Messrs. KIPP-KELLY LIMITED, Winnipeg, Man. - - *Western Agents*

LOOK HERE!

for something you perhaps need to modernize your plant so it will minimize your labor and increase your profits.

Attrition Mills
Bag Closing Machine
Bags and Burlap
Bearings { Ball / Roller
Ball
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Boots
Buckets
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Car Mover
Car Puller
Car Seals
Cement
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Corn Cracker
Conveying Machinery
Cylinders (Indented)
Distributor
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Drain Circulating Pump
Dump
Dust Collector
Dust Protector
Elevator Brushes
Elevator Leg
Elevator Paint
Feed Mill
Fire Barrels
Fire Extinguishers
Friction Clutch
Grain Driers
Grain Tables
Lightning Rods
Magnetic Separator
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Mustard Seed Separator
Oat Bleachers and Purifiers
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Power { Oil Engine / Gas Engine / Motors
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Railroad Claim Books
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Scarifying Machine
Short System Flour Mills
Separator
Sheller
Siding-Roofing { Asbestos / Steel
Silent Chain Drive
Speed Reduction Gears
Storage Tanks
Spouting
Testing Apparatus
Transmission Machinery
Transmission Rope
Waterproofing (Cement)

Draw line through supplies required, or, if not on above list, specify on letter head and send to us. We will put you in touch with the best firms specializing in your requirements.

CANADIAN
MILLING & GRAIN
JOURNAL
DUBRULE BUILDING MONTREAL, P.Q.

The Hall Mark For Twine

DOON TWINES — D — MADE IN CANADA

Doon Twines Tie and Sew---to stay.

Flour sacks or bags do not break open at the top where DOON TWINES are used

SKEINS COILS BALLS REELS

Get our samples.

DOON TWINES, LIMITED
KITCHENER, ONTARIO

Western Canada Flour Mills Company
LIMITED

HEAD OFFICE - TORONTO, ONT. N. Y. OFFICE - ROOM 1001. 44 WHITEHALL ST. NEW YORK
CABLE ADDRESS:—"LAKHURON"

MILLERS OF SELECTED HARD SPRING WHEAT FLOURS

Brands:—"PURITY" "THREE STARS" "BATTLE" "MAITLAND"

WINNIPEG MILL

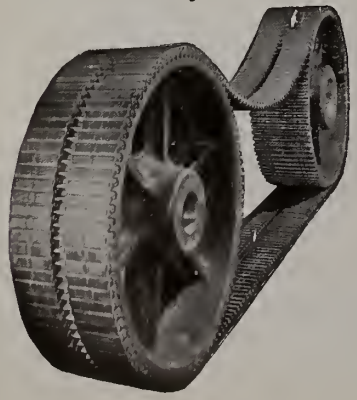
Daily capacity 10,000 bbls. Flour.
" " 1,000 bbls. Rolled Oats.

100 Interior Elevators Throughout Canada's Famous Wheat Belt

The Reason Why!

Morse Silent Chain Drives

Operate in practically all Grain Elevators and Flour Mills in Canada is because of their Frictionless Rocker Joints. Oil Baths not necessary.



Immediate deliveries.

Write for Catalogue.

Jones & Glassco, *Reg.*

St. Nicholas Bldg.
MONTREAL
Bk. of Hamilton Bl'g.
TORONTO

BAGS

JUTE AND COTTON BAGS, HESSIANS BURLAPS, BUCKRAMS, PADDINGS, TWINES, ETC.

The CANADIAN BAG Co., Limited

HEAD OFFICE:

427 St. Patrick Street, Montreal

BRANCHES:

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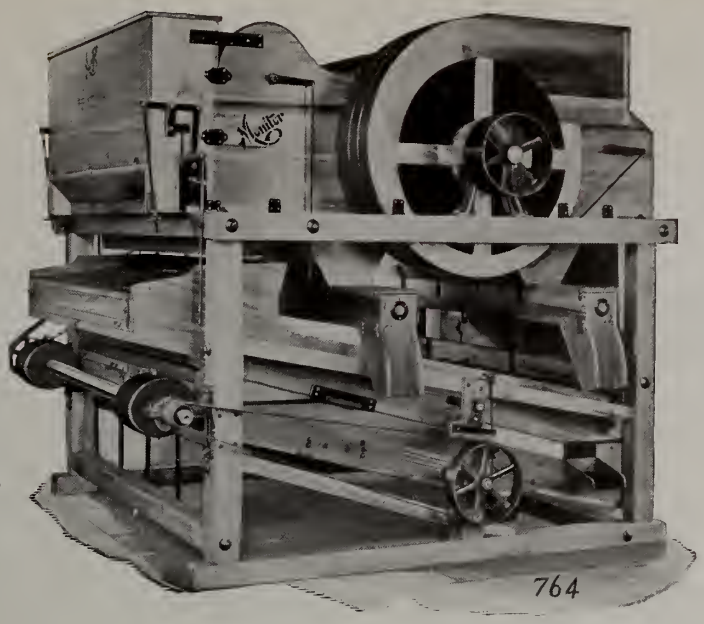


Are You Losing Good Grain?

What is there to be gained by using any cleaner which pulls over good wheat with the screenings? Yet, that is a common fault with some cleaners. They lack power of discrimination but that lack costs you money.

Not so with the MONITOR. Its air separations are easily adjusted so that you get nothing from the conveyor tips but pure screenings but you do get them all. The wheat passing through will grade high.

This is reason enough for making your next cleaner a MONITOR.

The Monitor
REGISTERED TRADE-MARK

HUNTLEY MFG. CO.

Tillsonburg, Ontario, Canada

Represented by:— MR. WILL HILL, 404 McArthur Building, Winnipeg, Manitoba.

1921 was a good year

1922 was a better year

1923

will prove a bumper year for Canada's Milling and Grain Handling Industries

Start the New Year well and get in line early for your share of this trade?

You will probably get some but you will certainly get more if you advertise in

CANADIAN MILLING & GRAIN JOURNAL

Rates on application.

Dubrule Bldg. - Phillips Sq.
Plat. 1983 Montreal, P.Q.

Established 1854 Cable Address: HUNTMILL

Capacity 1200 barrels daily

HUNT BROTHERS
LIMITED

Head Office and Mills
LONDON CANADA

MILLERS OF
Manitoba Spring Wheat Flour
Ontario Winter Wheat Flour

Hunt's Flour "Becomes a Habit"

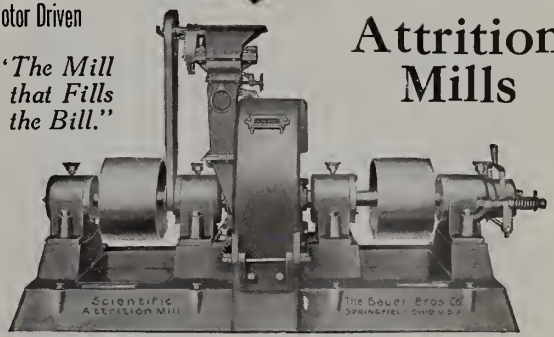
The Bauer
COSTS LESS PER HOUR

Belt and Motor Driven

Ball-Bearing Heavy Duty

Attrition Mills

"The Mill that Fills the Bill."



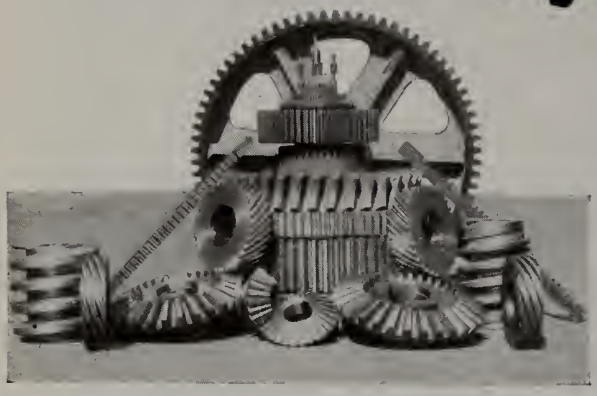
The Bauer Ball-Bearing Belt-Driven Attrition Mill

There is no good reason for experimenting with Grinding Machinery or grinding methods. Neither method results in profits. Are you sure that you are making ALL the profit possible? Why not put the problem up to the Bauer Engineering Department? This service is FREE to ALL millers. Take advantage of it.

Send for Catalog.

THE BAUER BROS. CO.
544 Bauer Bldg., Springfield, Ohio, U.S.A.
Makers of Bauer Attrition Mills, Corn Crackers, Cake Breakers Centrifugal Reels, etc.

We make all kinds of good gears



Ask us for quotations

Hamilton Gear & Machine Co.

76 Van Horne St. - TORONTO

Lincoln Bags Last

Do Your Flour Sacks Fail?

Then they are not Lincoln Sacks! Lincoln's are staunch, taut, trig and sound. From mill to consumer not an ounce of flour gets away.

All Rope Flour Sacks, Cream, White Coated and Blue Lined

Car Lining Paper

Samples and Prices gladly sent on request

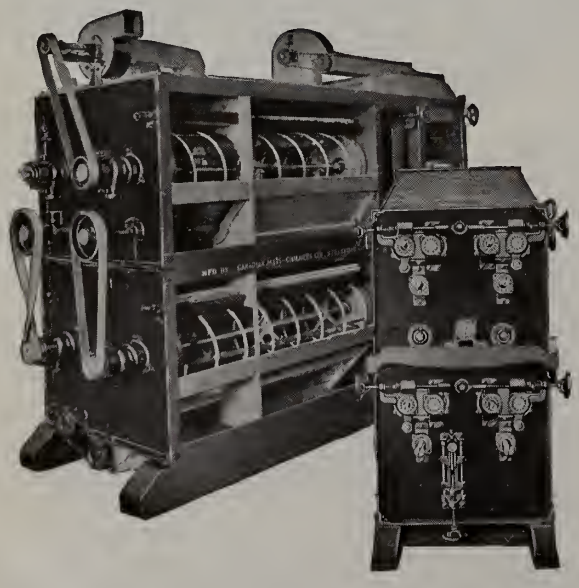
LINCOLN MILLS LIMITED.
MERRITTON, ONT.

Sales Office, 43 King St. West, Toronto

THE XXth CENTURY FLOUR MILL

is equipped with

29 Self-Aligning Ball Bearings



UNIT flour mills equipped with plain bearings consume a surprising amount of power to overcome friction. This energy is not only lost, but is the source of a host of troubles which impair the efficiency of the mill.

The twenty-nine SKF marked self-aligning ball-bearings used in the above unit mill save most of this wasted power. They prevent heating, sticking and binding which often result from the use of plain bearings—at the same time they eliminate the wear which would cause rolls to get out of tram and necessitate readjustment. They also eliminate lateral or advance roll motion by slackness through worn bearings, thus giving an unvariable, rigid position to the roll.

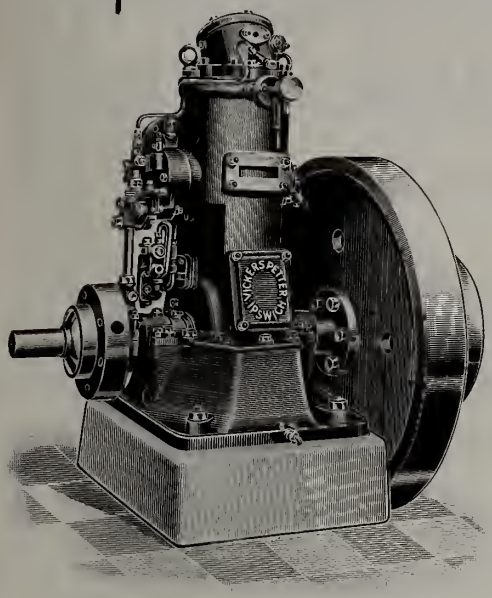
We would be very glad to send you additional information regarding operation of the XXth Century Mill.

CANADIAN ALLIS-CHALMERS LIMITED

Head Office - TORONTO

Branch Offices; HALIFAX, SYDNEY, ST. JOHN, MONTREAL, QUEBEC, OTTAWA, HAMILTON, LONDON, WINDSOR, COBALT, SOUTH PORCUPINE, WINNIPEG, CALGARY, EDMONTON, VANCOUVER, NELSON, AND VICTORIA

Petterize Your Power Problems



Vickers-Petter Oil Engines

(PETTERS' PATENTS)

The last word in Semi-Diesel Engine Development.

ECONOMICAL—
Fuel consumption .5 of pint per B.H.P. per hour.
Lubricating Oil .006 " " " " " "

DEPENDABLE—
Starts instantly from cold, and will last a lifetime.

SIMPLE—
Valveless and Camless,
Lubrication and Cooling Automatic & Foolproof.

SAFE—
Fire risk at a minimum.

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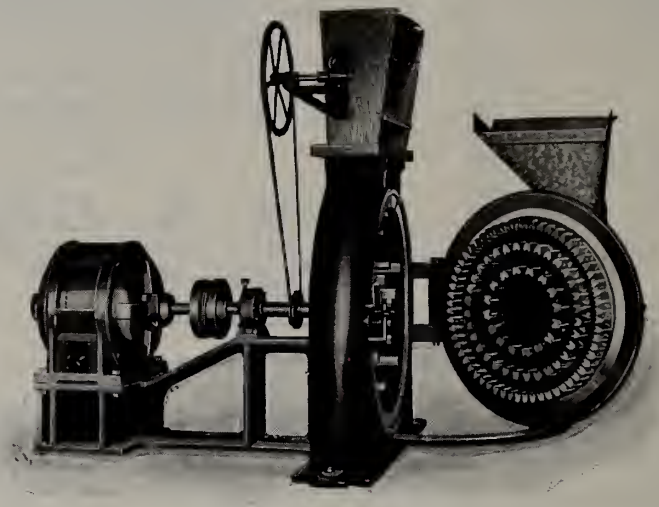

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CANADIAN Milling & Grain JOURNAL

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Dubrule Bldg.
Phillips Square
Tel. Plateau 1983

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VOL. III MONTREAL, DECEMBER 1st, 1922. No 21

CANADA'S ONLY MILLING AND GRAIN PAPER

Quality in Grain Production

THE attention of millers, elevator operators, grain handlers and those engaged in the allied trades is directed to some timely remarks on page 22 of this issue, on the all-important subject of the maintenance of the quality of the country's wheat.

It appears that never before have there been so many complaints from grain growers regarding the low grading of their products as have been recorded this year. In a majority of the complaints investigated it has been found that the presence of weeds and weed seeds in the grain resulted in low grading.

The consequences of permitting the quality of Canadian wheat to deteriorate will be apparent to all those who have the interests of one of the great basic industries of the country at heart, and no time should be lost by those who are in a position to do so, and by "those" are inferred millers, elevator operators and grain handlers who come in contact with the grain growing fraternity, in starting a campaign of propaganda, the main object of which should be to impress upon the grain growers the desirability of making use of such grain cleaning appliances as may suit their individual needs.

Millers are particularly interested in the matter, for, if Canadian wheat loses its present reputation for high quality, the proud position held by Canadian flour is naturally bound to suffer also.

More Co-ordination Necessary

NEVER before, perhaps, in the history of the Dominion's annual crop movement has there occurred such congestion as is at present the case. Handling facilities at bay ports and at seaboard, which up to the commencement of the present crop moving season were deemed ample to take care of any abnormal volume of business, are proving totally inadequate despite herculean efforts on the part of those responsible to keep the torrents of wheat moving smoothly.

Because of the congestion, rates have shot up to unprecedented heights. Many grain men have suffered heavy financial loss, because in order to fulfil contract deliveries ruinous rates had to be paid for tonnage, and at the present time there is no relief in sight.

All this has been occasioned by a crop, which though a bumper one as past records go, represents but a fraction of western possibilities, and if, as is to be hoped, the prairie crop output increases from now on, what is to happen when the country's exportable surplus is twenty-five or even fifty per cent. greater than it is to-day?

The entire congestion trouble lies between the bay ports and seaboard. The terminals at lakes head are in a position to handle even a greater rush of business than that which is being so efficiently managed now. Montreal, it is true, is enlarging its elevator facilities, but what would appear to be necessary if confusion worse confounded is to be avoided next year is a general conference of grain handling interests representing the Winnipeg Grain Exchange, the lake and rail transportation country and terminal elevator interests, the mills, corn exchange associations and other important bodies interested in the expeditious marketing of the country's annual crop.

Incidentally, it would be highly interesting to know why the big grain elevator at Quebec is not, as reported, getting any share of the grain traffic, and thereby assisting towards relieving a state of congestion which is presently threatening to paralyse the industry between Montreal and the bay ports?

Oceans of Blood

THE final figures of the losses in the world war have recently been issued by the Central Record Office of the American Expeditionary Force show that all countries lost an aggregate of 7,668,-300 killed and 18,681,257 wounded. For every hour the conflict lasted 207.07 men were killed and 506 wounded. France lost 1,385,300 killed or 37.7 per hour, and 2,675,000 wounded, or 72.8 hourly. The British Empire's losses are placed at 692,965 killed, or 18.8 an hour, and 2,037,325 wounded, or 55.4 hourly. Russia's losses are approximated, the total killed being estimated at 1,700,000, and wounded 5,950,000. Austria lost 800,000 killed and 3,200,000 wounded. Germany sustained losses of 1,808,548 killed and 4,246,779 wounded. The United States had 50,327 killed and 205,690 wounded.

And then in the face of this dreadful story there are people in the world whose one object in life seems to be to create discord among nations that will lead to a repetition of those blood-soaked years of 1914-18, of which the above dreadful statistics are but a brief record.

His Satanic Majesty must smile when he thinks of the precept, "And Thou Shalt Love Thy Neighbor as Thyself?"

Dockage Can be Eliminated

WITH the annual crop movement in full swing the present could not be a more opportune time for elevator operators throughout the country to impress upon grain producers in their districts the desirability of delivering their grain as free as possible from the presence of dockage.

To the producer, dealer, and manufacturer, the condition of grain at the time of selling is obviously of far-reaching importance and this means in a very large degree freedom from dockage, an element which is the cause of much friction and no end of irritation, for it involves the question of grade, and right there is where so many differences of opinion occur.

With the question of dockage in large measure eliminated, the grading of grain is to that degree simplified and a great degree of satisfaction to producer, dealer and manufacturer assured.

Most threshing machines are equipped with sieves designed to remove weed seeds from the grain which are smaller than the grain which is being threshed, but the sieve will not reduce dockage by eliminating wild oats, cockle, wild peas and other large weed seeds in anything like the same efficient manner that a properly designed separator will do.

Grain buyers, therefore, who are desirous of improving their own business should constitute themselves boosters among their customers for modern separating and grain cleaning equipment. The results obtained would more than compensate for the time spent.

Overhead Costs and Their Consideration

IN the general practice of cost accounting in flour mills and elevator companies, overhead or burden costs are classified as expense items which cannot be directly attributed to some particular product. They are composed of indirect labor and material, rent, etc. Overhead being variable as related to output, and forming a material portion of a plant's expense, it is necessary that control over these accounts be rigidly kept.

Control is possible only when accurate knowledge of the amounts entering into each item composing overhead are known. Guessing or estimating amounts of overhead, as well as arbitrary distribution without a sound basis for the allocation is uncertain and leads to unexpected, even sometimes startling results. Sales price does not affect overhead, but the amount of overhead definitely and absolutely affects sales price.

In order that overhead costs may be accurately determined detailed cost reports showing just what expenditures are necessary to produce or handle goods are needed. With this material at hand the accountant is in a position to note the variables and to put into operation the elements necessary for their satisfactory control. In this respect the cost system is similar to the nerve system of the body, its function being to transmit information regarding conditions in the entire plant to some central individual or body.

In the cases of many mills and elevators their worst competition is their ignorance of what it costs them to produce and do business.

Other Points of View

NO PLACE TO GO

Indianapolis News: Wilhelm's new wife will call herself queen of Prussia, but that's just like being a star actress who is "not working just now."

TOO DEMOCRATIC FOR THEM

Louisville Courier-Journal: "The King will hold a council to-day," is the complete announcement of the London Times. Many Americans who shout their devotion to democracy and their contempt of kings will find it hard to understand how a newspaper can dispose of such an event in seven words.

THE HECKLER IN ELECTIONS

Manchester Guardian: It often happens that the healthiest feature of a political meeting is the heckler. He may be only a noisy nuisance, but he may render the gathering the supreme service of smashing right through some sonorous phrase to the reality, or lack of reality, beneath it. There is sometimes value in splitting hairs; there is always value in splitting words, which, as the philosopher Hobbes remarked, are wise men's counters, but the coinage of fools.

GROUP EXTREMISTS

Medicine Hat News:—Mr. Crerar, in retiring from the leadership of the Progressives, made a significant reference to extremists of the group who had fallen into the attitude of placing the party's weal above the nation's welfare. Reading between the lines, it appears to be quite plain that Henry Wise Wood and his doctrines are responsible for the split in the Progressive ranks and that Mr. Crerar is desirous of making that fact known. The Alberta Progressives are trying to walk so straight and upright along the path indicated by Mr. Wood that they are in danger of falling over backwards.

AT HOME AND ABROAD

American Miller:—In the Canadian West some of the farmers' friends are trying to revive the Wheat Board idea, after they conspicuously failed to put it into effect after they got the necessary government authority. The farmers' political friends in Canada are just like our own. They want something to talk about and agitate; they want legislative enactments and all that sort of thing; they shine as critics. But in constructive work they are lacking. The farmers should cashier their political leaders.

THE ANNIHILATION OF SPACE

Detroit News:—Civilization never rests. Soon or late every individual under the sun has got to know about it. Consider the Chinese, many of whom are quite content with their own civilization, much older than ours, and great masses of whom have managed to keep it inviolate due simply to the fact that they live in inaccessible places. Enter the airplane and the radio. Civilization laughs at the Chinese hermits and says: "Listen to me!" and the missionaries drop in by airplane and establish a mission. The radio voice leaps mountains and rumbles around in places no stranger has been hardy enough to penetrate.

Eastern Provinces

MONTREAL

Dubrule Building
Phillips Square Tel. Plateau 1983

MONTREAL DECEMBER 1ST. 1922

THE MONTREAL MARKETS

Flour.—The putting into effect within the past fortnight of two increases of 10 cents per barrel in each case does not appear to have resulted in any appreciable change in the volume of orders being received for both local and country account. A steady business continues to be done in spring wheat grades and this, coupled with the heavy orders on hand for export account, is keeping the mills for the most part working at capacity.

First patents are now being quoted at $7.10, seconds at $6.60, and strong bakers at $6.40 per barrel, in jute bags, ex-track, less the usual discount.

In the winter wheat market there continues to be a strong demand for the comparatively small quantities offering. Sales of carlots of choice grades are being recorded at $5.65 to $5.75 per barrel, in second hand jute bags, ex-track, with smaller quantities quoted at $5.90 and $6 per barrel, ex-store, and winter wheat patents at $6.50 per barrel, in new cotton. The trade in white corn flour has been fair at $5 to $5.10 per barrel, in jute bags, delivered to the trade.

Grain.—Following a protracted period of advancing prices, one result of which was a general increase in flour prices of 20 cents per barrel, the grain market had a slight setback towards the end of November, the reason assigned for this being a sudden development of extreme weakness in the security market. Disappointing cable advices likewise had an adverse effect on business, and as a result the volume of export trade showed a slackening up. New York exporters were recently bidding 21 cents over the Winnipeg option, f.o.b. West St. John or Portland for last half December shipment, for No. 3 Northern Manitoba.

CONGESTION AT MONTREAL DENIED

Despatches from Ottawa with regard to grain congestion in this port, and stating that there were 1,300 cars of grain here recently waiting to be unloaded, were generally contradicted at Montreal. It was pointed out by local grain and shipping men that 1,300 cars, while being a considerable number, mean only a detention of three or four days, the average detention of a lake boat.

The movement of grain through the elevators is continuous and as rapid as can be expected in normal circumstances. The tremendous volume of American and Canadian grain has been handled energetically from the first and the suggestion that American grain is hindering the movement of Canadian grain is said to be fallacious because American grain moves out before the Canadian harvest is gathered.

NO EMBARGO ON CANADA WHEAT

Washington.—The Interstate Commerce Commission has decided that it cannot place an embargo on Canadian wheat and corn, a request made to it by the American Farm Bureau Federation. This information has been transmitted to the federation. It is held by the commission in the first place that it doubts its legal authority to take such a step, and in the second place it is apprehensive over possible international complications resulting from such a drastic move.

A SOUVENIR OF THE 1922 ANNUAL MEETING AT MONTREAL, OF THE CANADIAN NATIONAL MILLERS' ASSOCIATION

The above picture was taken prior to embarking on the Sir Hugh Allan for an inspection of the harbor. Reading from left to right: Messrs.

D. M. Wilson, St. Lawrence Flour Mills Co., Ltd., Montreal.
F. H. Peck, Maple Leaf Milling Co., Ltd., Montreal.
A C. McLeod, McLeod Milling Company, Stratford, Ont.
C. R. Hunt, Hunt Bros., Ltd., London, Ont.
W. W. Hutchison, Lake of the Woods Milling Co., Ltd., Montreal.
G. M. Shirk Shirk & Snider, Ltd., Bridgeport, Ont.
J. E. Weeks, Ogilvie Flour Mills Co.,, Ltd., Montreal.
M. H. Hutchison, Lake of the Woods Milling Co., Ltd., Montreal.
J. A. McDonald, McDonald & Robb, Valleyfield, Que. Vice-Pres. C.N.M.A.
T. F. McNally, Lake of the Woods Milling Co., Ltd., Montreal.
J. E. Macfarlane, Western Canada Flour Mills Co., Ltd., Toronto, Ont. Vice-Pres. C.N.M.A.
C. B. Watts, Dominion Millers' Association, Toronto, Ont.
B. W. Meyers, Peterboro Cereal Co., Peterboro, Ont.
Brig.-Gen. A. E. Labelle, St. Lawrence Flour Mills Co., Ltd., Montreal. Past Pres. C.N.M.A.
J. A. Marshall, Western Canada Flour Mills Co., Ltd., Montreal.
G. A. MacDonald, Quaker Oats Company, Peterboro, Ont., the new President.
Chas. Ritz, Robin Hood Mills, Ltd., Montreal.
H. P. Feeney, Canadian Milling & Grain Journal, Montreal.
T. Williamson, St. Lawrence Flour Mills Co., Ltd., Montreal.
D. F. Thornton, St. Lawrence Flour Mills Co., Ltd., Montreal.
A A. Lavoie, St. Lawrence Flour Mills Co., Ltd., Montreal.
Paul Labelle, St. Lawrence Flour Mills Co., Ltd., Montreal.
F. C. Cornell, Secretary Canadian National Millers' Association, Montreal.
W. T. Sylvestre, W. C. Sylvestre & Sons, Vankleek Hill, Ont.

CANADIAN GRAIN MEN WATCHING U. S. LEGISLATION RE FUTURES

Winnipeg.—The outcome of the suits brought by the leading grain exchanges of the United States to test the validity of the recently enacted grain futures trading law will be watched with interest by all branches of the trade in Canada. The results of this suit probably will be more definite than any of the others. If the bill is found to be constitutional the exchanges will reconcile themselves to the various regulations while if it is pronounced invalid, it is expected in many quarters that no further important effort toward restricting speculative trade.

Whatever the outcome, however, it can safely be said that the wide publicity given speculative trade in grain and the operations of grain exchanges has resulted in one thing; many people now take a broader view of the market than they did before. The mere mention of the word speculation is not the cause for an upheaval. It has come to be an accepted fact that speculation exists in all markets, no matter what the commodity traded in or what the machinery for the trading. In grain, the speculative element is separated a little more distinctly and consequently it has been more conspicuous.—Western Grain Journal.

ARGENTINE CROP ESTIMATES

Buenos Aires.—The Argentine government has issued the following crop estimate for 1923. The official estimate of sowings is: wheat, 6,507,000 hectares; linseed, 1,638,610; oats, 1,059,350. The provisional yield estimate in metric tons is: wheat, 5,860,000; linseed, 1,531,000, and oats, 720,000.

OBITUARY

Mr. Joseph C. Bisaillon, of Montreal, hay and grain exporter, with offices in the Board of Trade Building, died recently at his home, 70 Pine avenue, St. Lambert. Mr. Bisaillon, who had been ill for nearly three months, was stricken with cerebral hemorrhage while writing at his desk.

The late Mr. Bisaillon was born in Montreal slightly over 55 years ago, was educated there, and entered the hay and grain business with Messrs. Quintal & Lynch. A few years later he went to Europe to make trade connections before going into business for himself. He was a member of the Grain Exchange, and two years ago was on the executive of the Dominion Commercial Travellers' Association.

Toronto.—The death took place at his late residence on Howland Avenue, Toronto, of Mr. Archibald Stewart Turner, Chief Grain Inspector of the Eastern Division for the Federal Government. The late Mr. Turner was born in Toronto in 1870. He went into the grain business after leaving school, and for some years was with his uncle's firm, Turner & Sproule. He succeeded the late E. M. Campbell in his present position nine years ago. He was widely known in the milling and grain trade throughout Canada.

QUOTATIONS ON BRAN AND SHORTS

The following nominal quotations on bran and shorts have been reported by the Canadian National Millers' Association, Coristine Building, Montreal, to the United States Customs Authorities as the prices of these commodities now in effect. These prices are the net cash prices in bulk, f.o.b., the mill:

	Bran.	Shorts.
Montreal	$22.00	$24.00
Toronto	22.00	24.00
Port Colborne	17.50	19.50
Fort William	15.50	17.50
Keewatin	16.50	18.50
Winnipeg	15.00	16.00
Moose Jaw	12.00	14.00
Calgary	11.00	13.00

ANOTHER INVESTIGATION COMING?

Winnipeg.—That a complete investigation into the matter of handling Western Canada's yearly grain crop will be discussed at the next session of the Dominion Parliament was intimated by Robert Forke, House leader of the Progressive party, addressing a meeting at St. George, Manitoba, recently.

Declaring that there was considerable agitation with regard to the grain trade, Mr. Forke said, in view of this a commission in all probability, would be appointed to carry on an investigation.

COPIES OF TARIFFS AND SUPPLEMENTS

For the information of those interested copies of the new eastern tariffs and supplements, issued between Nov. 6, 1922, and Nov. 9, 1922, and listed below can be obtained on application to the Canadian National Millers' Association, Coristine Building, Montreal.

Eastern Tariffs Only

No.	Issued by	Cancels	Effective
C.G. 52	C.N.R.	0	Nov. 1, 1922

Supplements

No.	Tariff	Issued by	Cancels	Effective
20	C.G. 26	C.N.R.	19	Dec. 1, 1922
19	C.Y. 67	G.T.R.	0	Oct. 17, 1922
25	....	....	..	.....
26	....	....	..	.....
2	E. 3750	C.P.R.	1	Dec. 5, 1922
4	E. 3807	C.P.R.	3	Nov. 8, 1922
33	C.G. 1	C.N.R.	32	Nov. 9, 1922
19	C.G. 10	C.N.R.	0	Dec. 5, 1922
24	C.R. 33	C.N.R.	0	Nov. 9, 1922

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Ontario

TORONTO

TORONTO DECEMBER 1ST. 1922

THE TORONTO MARKETS

Flour.—The flour market has been gradually advancing at the rate of about ten cents whenever the market warranted it until the price is now $7.10 for first patents and $6.60 for second patents. Bakers, of course, can contract at slightly lower figures but most of them appear to have placed their orders for several months ahead. The export business is practically at a standstill although many enquiries are coming in. Prices of Canadian dealers, however, are from one shilling and six pence (0.33) to two shillings (0.44) too high for buyers across the ocean. It would appear as if United Kingdom buyers cannot pay the price without putting bread up, and there is a reluctance to do this in view of the unsettled social state of the British Isles, although it is known that stocks of flour over there are getting very low. The hope exists in England that the Argentine will soon be shipping in large quantities of flour which would probably have the effect of lowering the Canadian price. There is a good demand for Ontario winter flour, but very little is available. Exporters are now paying $5.20 in bulk seaboard, the domestic price being $5.30 to $5.60, in jute bags.

Millfeeds.—The market for millfeeds remains strong with an excellent demand for both bran and shorts. Fall business is opening up well and there is a big movement in the product, both for domestic and export use. Bran and shorts have advanced from two to three dollars during the past three weeks. Bran is now quoted at $24 and shorts at $26, with feed flour at $1.80, and white middlings at $30.

Oil cake.—A few cars of oil cake are being sold but there is comparatively small movement and the volume of sales is small. The prevailing price is $55.00 f.o.b. Toronto, car lots.

Cereals.—There are many enquiries for cereals for export but comparatively little business is passing. The domestic demand is fairly good, the price being $3.10, Montreal freight, per 91-lb. bag, for rolled oats and oatmeal in 98-lb. sacks at ten per cent. additional. The bids local dealers are getting are two shillings (0.44) lower than the price at which they require to sell.

Grain.—A rush to secure wheat for November-December delivery sent prices up with a rush in Toronto at the middle of November, although locally the market remained rather quiet with buying orders for wheat still of rather small volume. Millers are not very free buyers as yet, and in this connection it would appear that many of the smaller millers are not enjoying good business, owing to the excessive freight rates they have had to pay this season, while many of the larger mills have brought down their own wheat from the head of the lakes, and consequently are not putting a great deal of business into the hands of local dealers. Buckwheat and rye are in good demand from United States exporters, but deliveries remain so light that business is rather negligible. In regard to these two grains it is to be noted that the high United States tariff is reacting against the American producer, as far as foreign business is concerned. The United States exporter having enquiries for buckwheat or rye finds that, owing to the tariff, the price of United States grain has advanced and that he can purchase more cheaply in Canada, ship to the American seaboard in bond, and export it more profitably than he can handle the domestic grains. Barley is also wanted for sale to the maltsters. No. 2 Ontario rye is selling at 81c to 92c, and Ontario barley at 60c to 62c for malting, according to freight outside. Ontario oats, No. 2 white, are quoted at 42c to 44c, according to freight outside and Ontario wheat, No. 2 winter, per carlot, at $1.11 to $.14; No. 3 winter at $1.06 to $1.09, f.o.b. shipping points, according to freights.

Seeds. — Toronto wholesalers are offering the following prices for farmers' seeds, at country points, per bushel: alsike, $4.50 to $6.00; sweet clover, $2.50 to $3.25; red clover, $7.50 to $9.00.

SECURES TWO CHICAGO MEMBERS FOR SAMPLE GRAIN MARKET AT LAKES HEAD

Fort William.—Mayor N. Edmeston recently received the following letter from Mr. J. P. Kenny, who is in Chicago in the interests of the Fort William Sample Market and Produce Exchange:

"Dear Mr. Mayor—After a very strenuous month in Chicago, I have at last broken the ice with two applications for membership in the Fort William Sample Market and Produce Exchange, received since arriving here. Now that I have got started I am in high hopes of being able to keep going.

"As to the final outcome, there are still obstacles, but not by any means insurmountable ones. I am getting great assistance from Fort William's most influential non-resident friend John Crerar.

"The magnitude of the effect of this undertaking, from the standpoint of the interests of and the benefits to accrue to Fort William and Port Arthur, unfolds itself more greatly and more clearly almost every day, due to the knowledge gained by discussion of the matter with the Chicago grain trade and also with the Liverpool representative of a very large grain firm, with whom I have had the pleasure of several lengthy interviews. He is so interested that he has offered to give publicity to us in the grain trade papers of England and to post any communications from us, which we might wish to send him for that purpose, on the bulletin board in the trading room of the Liverpool Corn Exchange. "Sincerely yours—J. P. KENNY."

Port Arthur.—The Horn elevator here has been put into operation by the Gillespie Grain Company, Ltd., and is being used as a storage annex. The arrangement makes an additional three-quarters of a million storage available, in addition to the million and quarter given by the operation of the Davidson and Smith house by the Inland Seas Company. These two houses will take care of at least one day's arrivals of grain from the West.

OCTOBER FLOUR AND WHEAT EXPORTS

During the month of October last, the United States purchased 35,842 barrels of Canadian wheat flour, valued at $243,339, as compared with 41,992 barrels, valued at $284,010, in October, 1921. Exports of wheat flour to the United Kingdom during the same month were 424,304 barrels, valued at $2,211,954, as against 434,104 barrels, valued at $2,981,152, in October, 1921. Most of the October, 1922, flour shipments to Great Britain also went from Canadian ports, the figures being: From Canadian ports, 327,932 barrels; United States ports, 96,372 barrels. In October, 1921, 267,681 barrels of flour went from Canadian ports and 166,423 from American ports to the United Kingdom.

Canada's exports of wheat during the month of October last nearly doubled, both in quantity and value, her exports for the month of October of last year, according to the Dominion Bureau of Statistics. Exports during the month of October, 1922, were 37,593,074 bushels, valued at $40,017,249, as against 21,130,579 bushels, consigned to "other countries" went through United States ports, and 877,368 bushels through Canadian ports. This year a total of 3,369,309 bushels went through Canadian ports and only 1,747,612 bushels through American channels.

SAYS CONGESTION DANGER PAST

Winnipeg.—With the amount of grain which has been shipped to Lower Lake ports during the last few days relieving the situation, Mr. Charles Murphy, general manager of the Western Division of the Canadian Pacific Railway, stated recently upon his return from Fort William that there was no chance of any congestion at the head of the lakes before the close of navigation. The possibility that several boats would be available for winter storage should mean further relief for the elevators at the lakes head, Mr. Murphy said.

SPEEDING UP GRAIN MOVEMENT

Winnipeg.—With the close of navigation approaching, the Canadian Pacific and Canadian National Railways are making record shipments of grain from the prairies to the head of the Lakes. Since September 1, the commencement of the present crop year, the Canadian Pacific loaded 87,248 cars, a recent day accounting for 1,255 cars, against 396 for the same period last year. The Canadian National Railways are maintaining a standard of car movements of grain close to the 1,000 mark daily. The aggregate movement for the season is 66,184 cars and 84,482,000 bushels, as compared with 11,585 cars and 12,275,000 bushels for the corresponding period of 1921.

TRADE OPPORTUNITY

No. 286.—**Messrs. P. J. Valkeapaa, Ltd.,** Helsingfors, Finland, desire to get into communication with Canadian exporters of wheat flour who could utilize their services as representatives in Finland. Firm can sell at competitive prices c.i.f. Finland ports. As references they give the name of Messrs. R. & W. Davidson, Ltd., 68 Virginia Street, Glasgow, Scotland. They are prepared to act for Canadian shippers as agents on commission only.

The Modern Sophocles

TO be glad of life because it gives you the chance to love and to work and play, and to look up at the stars. To be satisfied with your possessions, but not contented with yourself until you have made the best of them. To despise nothing in the world except falsehood and meanness, and to fear thing except cowardice. To be governed by your admirations rather than by your disgusts; to covet nothing that is your neighbor's except his kindness of heart and gentleness of manners. To think seldom of your enemies, often of your friends, and every day, but especially this coming Christmas of Christ; and to spend as much time as you can, with body and with spirit, in God's out-of-doors. These are little guideposts on the footpath to peace.

MAY ADOPT CANADIAN METHODS

Winnipeg.—Mr. Kirchi Shirai, traffic manager of the Manchurian Railway has been in Winnipeg, in the course of a tour of inspection of the grain handling system of Canada, with a view of introducing similar methods into Manchuria.

The railway with which Mr. Shirai is connected has a trackage of more than 2,000 miles, extending over a country of which agriculture is the chief industry.

Mr. Shirai already has visited elevators along the Canadian Pacific lines in the west, and near Winnipeg inspected the Transcona elevators with which he was deeply impressed.

BIG INCREASE IN INSPECTIONS

Winnipeg.—Up to November 1 of this year the total of all grains inspected by the western division exceeded the inspections for the same period of 1921 by 37,232,125 bushels and nearly doubles the same period of 1920 when the total was 73,055,645 against 141,967,450 bushels for this year, a total which establishes a record for all years in Canadian history. Heretofore 1915 held the record. The total for that year is exceeded by the new record by more than 30,000,000 bushels.

U. S. RAILWAYS AND CANADIAN GRAIN

Washington.—A number of the railroads of the United States are discriminating against United States farmers in favor of Canadian business, according to charges made here by Senator Ladd, of North Dakota. "I saw whole train-loads of empty cars going north to Winnipeg and coming back loaded with wheat," he said.

Toronto.—The Russell-Bell Flour Mills, Limited, has been organized at Newmarket, Ont., to engage in a general milling and grain business. The authorized capital is $60,000, and among the incorporators are Messrs. George Gilson, M. Gilson and M. Wright.

Toronto.—An overheated motor caused an outbreak of fire at the plant of the Watt Milling Company at 40 Osler Avenue, Toronto, recently. Slight damage only was done.

Western Provinces

WINNIPEG

WINNIPEG DECEMBER 1ST. 1922

THE WINNIPEG MARKETS

Flour.—Business continues satisfactory with a splendid demand from both export and domestic sources. From the head of the Great Lakes and throughout the Prairie Provinces all mills are practically running full time filling their orders, and the majority have sufficient already booked to keep them busy until after Christmas. Prices have held strong and somewhat higher due to the extraordinary strength in wheat. This, it may be stated has greatly surprised, and to some extent, has worried millers, as they undoubtedly expected wheat prices to work lower, but they have been compelled to enter the market and buy large quantities with prices advancing almost daily.

Shipping conditions east and south continues difficult but an easier situation is looked for in the immediate future as it is anticipated that the railroads will be able to supply more cars for the handling of flour now that the peak of the western grain movement has been passed.

The bulk of Canadian flour exports appear to be finding their way to Europe, although a fair trade volume is being worked to the Orient, the West Indies and to the United States. In the case of the latter country business volume would undoubtedly be very much larger if the transportation situation were different from what it is, and notwithstanding the heavy duty Canadian flour is much sought for at many American points, and quality considered, is able to undersell the American variety. This demand for Canadian flour in the United States is worrying American millers who have made some representations to their government with the idea of securing an embargo against Canadian wheat and flour for domestic consumption. A report was received here quite recently that the United States government were expected to take some action along this line.

However, in the face of many business difficulties which are being gradually overcome, the Canadian milling industry is very active and is enjoying a profitable year. The prospects for continued large business is extremely bright, and millers now anticipate that the year 1922-3 will show one of the largest turnovers in the history of the trade.

Flour prices show an advance of 20c per bbl. since last report. For delivery at points between Fort William and the Saskatchewan boundary, top patent springs are quoted at $6.50 bbl. in jute bags, seconds $5.90 and first clears $5.20, mixed cars, 30-day terms. Cotton 10c over this basis. Saskatchewan and Alberta points are 10c under Manitoba and Pacific Coast points 30 to 50 cents over. Bakers and other carlot buyers get a slight discount from above prices.

Millfeed.—The demand for bran and shorts has been steady and about on a par with supplies. The Prairie Provinces have enjoyed an exceptionally mild fall and little frost and practically no snow has been reported yet. This has enabled cattle to graze on the prairies and pastures and has reduced feeding expenses to cattlemen. Large quantities of both bran and shorts are being shipped to Vancouver and other coast points where there is an excellent demand. Market has been firm and steady and prices about unchanged. Bran is quoted at $19 per ton in mixed cars with flour, and shorts at $21, in bags, delivered, Winnipeg territory.

Oatmeal.—Business in rolled oats and oatmeal continues to improve and is now considerably brisker than for some time resulting in larger trade tendency due to recent advance made in oat values. Present quotations are for good brands of rolled oats $2.75 in 80-lb. cotton bags, and oatmeal, $3.35 in 98-lb. cotton bags, delivered, Winnipeg territory.

Flaxseed Products.—There is a much better enquiry for oil cake and meal and with the approach of colder weather trade is expected to become much more active. Prices show little change, cake being quoted at $50 and meal $52 per ton, in bags, F.O.B., Winnipeg. The demand for oil is very quiet and little improvement is looked for in the immediate future. Raw oil is quoted at $1.20 and boiled $1.23 per gallon.

AT THE HEAD OF HIS PROFESSION

S. J. LAWELLEN

President of the American Association of Cereal Chemists and in charge of the Cereal Chemistry Department of the Milton Hersey Company, Winnipeg. The first instalment of an authoritative article on "Ash Content" by Mr. Lawellin will be found on page 28 of this issue.

Mr. Lawellen will answer any question submitted by readers to the Cereal Chemistry Department of "Canadian Milling & Grain Journal."

THE GRAIN MARKETS

The wheat market has been very strong, and closing prices each day have been higher than those of the previous day. The volume of business worked in the Winnipeg market has been tremendous, breaking all previous records, and this market has now assumed the position of the largest future market in the world as well as the largest cash market, a position it has held for some years. The Winnipeg market is now being used by hedgers the world over, which is largely brought about by United States government interference of trading in futures in American markets.

Around October 1, November contract wheat was

quoted at about 96c. On Saturday, November 18, this same contract closed at $1.14¾, showing a net gain of over 18c in six weeks. Wheat to-day is selling at 4c to 5c higher than at this time last year.

The buying in this market has been very large, exporters, shippers, Canadian and American millers all being active. The November position has been the leader in the recent strength, and it has been noted from day to day that it was difficult to fill buying orders without forcing prices. New York interests and commission houses have been steady buyers of November position wheat of late, and it is stated they have taken many millions of bushels out of the Winnipeg market. The "longs" have been apparently strong interests, and the selling has never been larger than could be comfortably absorbed. Hedging sales in the November position have been abnormally light, elevator companies using the deferred months. The cash demand has been excellent from day to day, sufficient to absorb the offerings at a premium over the cash month. The premiums have narrowed recently due to the advance in the futures, but ½c to ⅝c is still being paid. A premium of 6c to 7c over December is being paid for spot wheat first 10 days of the month. This brings it up to the level of November.

In so far as new export business is concerned there has been a decided pause, and it is understood that most of the buying that has been in evidence was to fill old contracts made some time ago. There is also an effort being made by the trade to get every bushel possible across the lakes before the close of navigation.

Oats.—The market has developed into a strong, active affair with prices showing an upward tendency. The demand recently has been excellent from both export and domestic sources, and a very much larger trade could have been worked had the offerings not been so light. Stocks in terminals are small and receipts from the country are not large.

Barley.—This market has been very firm and made gains largely in sympathy with the strength of other grains. There has been a fair business passing the demand about equal to the supply, which is in good hands as there has been no pressure on this commodity.

Rye.—A strong undertone prevails in this article. There is an enlarged enquiry from foreign markets, but the advance in the November contract has checked business to some extent. Available supplies, however, for lake shipment are controlled by good interests, and it is expected consumers will be forced to take on their needs around present values.

Flax.—The flax market has been steady with a light trade passing and the market is without any particular feature. Canadian crushers not interested at present, and report they are able to buy Argentine flax arriving in this country cheaper than local prices.

WESTERN GRAIN COMMISSION MEN AND THE FEDERAL STAMP TAX LAW

Winnipeg.—A new angle on the federal stamp tax has been discovered in the grain trade, one which is giving some grain producers the basis for criticism and correspondence of a more or less lurid type. The commission houses which handle wheat in car lots do so on a standard rate of one cent per bushel, the grain usually being consigned to them with instructions to sell on spot at Fort William as requested, or when it is possible to get a certain stated price. The grain remains the property of the producer until sold, according to instructions. It is a rule of the trade that this commission shall be clear cut, and that no commission house shall depart from the fixed rate, which for a 1,250 bushel car amounts to $12.50 net. It is the rule in the trade to include the cost of the stamps on cheque in settlement in the costs of the service discharged for the producer, along with freight, cost of inspection and weighing and exchange. Numerous letters to the commission houses indicate the farmers are endeavoring to call attention to the innovation and tax as something they are averse to paying.

Opinion is Divided

The question is under consideration at the Grain Exchange and it is understood the members are not all of one mind. It has been proposed that the commission houses shall bear the cost of the stamps and increase the commission charge to 1¼ cents. That would increase the cost to the producer over the cost of the stamps as at present, and it is, therefore, argued the farmer is better served to hold the commission basis for the deal, paying all incidental costs, leaving the commission house the one cent net on the transaction. Opposition is further taken to altering the plan in the middle of the season, and it is unlikely there will be any change made this year.

THE WESTERN MARKETS

The following report furnished by the Winnipeg Grain Exchange, shows daily highest price levels from Nov. 13, 1922 to Nov. 25, 1922, inclusive.

	Nov. 13	Nov. 14	Nov. 15	Nov. 16	Nov. 17	Nov. 18	Nov. 20	Nov. 21	Nov. 22	Nov. 23	Nov. 24	Nov. 25
December Wheat	1.02¼	1.03⅞	1.05	1.05¾	1.06	1.07½	1.07⅞	1.07½	1.07½	1.05⅝	1.05⅝	1.04⅜
May Wheat	1.05¼	1.06¼	1.07⅜	1.08⅜	1.09⅛	1.10⅜	1.10¾	1.10½	1.10⅝	1.09	1.09¼	1.08½
July Wheat	1.04⅜	1.04⅜	1.05⅝	1.06¾	1.07¼	1.08⅝	1.09	1.08⅝	1.08½	1.07⅜	1.07¾	1.06½
December Flax	1.91½	1.95½	1.96¾	1.97½	1.96	1.96½	1.95½	1.94	1.94¾	1.91½	1.91½	1.90
May Flax	1.91	1.94	1.95½	1.96	1.94	1.94¼	1.93	1.92¼	1.94¾	1.91½	1.91½	1.90½
December Rye	0.78⅜	0.79⅜	0.81	0.82⅞	0.83⅝	0.88	0.86	0.84¼	0.84¾	0.83½	0.82½	0.80¾
May Rye	0.81¼	0.82	0.81¾	0.85¼	0.86¼	0.90	0.89¼	0.87	0.86⅞	0.85¼	0.84⅞	0.84
December Barley	0.52⅞	0.53	0.53⅝	0.53⅞	0.55¼	0.57⅞	0.67	0.55¼	0.55½	0.54⅞	0.55⅛	0.54¾
May Barley	0.56¾	0.56⅞	0.57⅜	0.57⅝	0.59	0.60½	0.60	0.59¼	0.59⅜	0.58¾	0.58⅞	0.58½
December Oats	0.40¼	0.40¾	0.42⅜	0.42⅝	0.43½	0.45¼	0.45⅜	0.44⅝	0.44⅜	0.44⅛	0.43⅝	0.43⅜
May Oats	0.43⅜	0.44⅜	0.45⅜	0.45⅝	0.46⅜	0.47⅝	0.47⅜	0.46½	0.46⅝	0.46½	0.46¼	0.46⅛
July Oats	0.43¼	0.44	0.45⅜	0.45⅝	0.46	0.46¾	0.46¼	0.46	0.46⅛	0.45¾	0.45⅞	0.45½

Foreign Flour and Grain News

THE popularity of Canadian flour is more in evidence than ever. According to the latest reports of exports of this commodity flour is following almost the same curve as grain in its upward tendency and up to the end of October, the last month for which complete records are available, 2,737,589 sacks of Canadian flour had been shipped from Montreal to Europe, an increase over last year of over half a million sacks.

The monthly output is also significant, 560,753 sacks being shipped out last month while in the same time in 1921, 375,994 sacks were shipped.

It is estimated by Montreal Board of Trade officials that the export for the current month will much increase the total for the season and bring the year's export far in excess of the total of the 1921 shipping season which aggregated 2,934,000 sacks. Apart from the European demand, Newfoundland has also been a heavy buyer of the Canadian product.

With regard to grain the approaching close of navigation at Montreal and the growing scarcity of desirable boats in prompt positions for loading there was responsible for the stiffening of the rate in connection with the charter of the Smith Line steamer Norwich City, taken to load 40,000 quarters for Havre, Antwerp or Hamburg, to 20c one port of discharge, 21c two ports. A report that the vessel might load at Quebec could not be verified.

The seriousness of Montreal conditions as to grain shipments in November directed attention to the likelihood of West St. John figuring to a more than ordinary extent in steamer charters in the next six weeks. Shippers were said to have made inquiries on boats for loading at that port during the first half of December.

They were also reported bidding 13½c from Portland, Me., to Rotterdam this month. For right sizes in good position some brokers thought that merchants would quote higher than that rate. Even with West St. John used as a relief a large quantity of grain for Europe will have to be moved from Montreal to Portland soon, it is said.

ARGENTINA—Fine weather has again been experienced of late, and the crops are progressing excellently. Rains have fallen in the southwest, which are quite favorable, as the crop there is late. The opinion is expressed that wheat, oats and linseed will exceed all previous records. Maize has started under favorable conditions.

AUSTRALIA—Beneficial rains have fallen in many districts of New South Wales and Victoria, while light falls have also been experienced in South Australia and West Australia.

FRANCE—Heavy rains, accompanied by occasional snowfalls, have been experienced in most Central and Northern departments recently. Sowing is everywhere proceeding with the greatest activity and over extensive areas operations are now complete. Reports make particular mention of the fine appearance of the first fields of winter wheat and oats. Generally speaking, the agricultural situation is much more favorable than at this time last year, and if weather conditions continue propitious, it may be taken for granted that the acreage sown to winter wheat will be larger than in 1921.

INDIA—It is officially stated that sowing of wheat has started in the north-east of the United Provinces, and the sowing of grain is in full swing.

THE BRITISH FLOUR MARKET

London.—The reaction in the flour trade has helped to create a more satisfactory feeling, and there has been more flour sold of late than for several months past. It cannot be said, however, that flour buyers have entered the arena whole-heartedly beyond the fact that they have taken on a few weeks' supply instead of as in the days of real booking when a three months' supply was not considered much, and there is little inclination to follow the recent rise and buyers in most instances refuse to buy except at the previous official price.

THE CHICAGO MARKETS

The following table compiled from figures furnished by Messrs. Logan & Bryan, members of the Winnipeg Grain Exchange and the Chicago Board of Trade, C.P.R. Telegraph Chambers, Montreal, shows highest price levels recorded on Chicago Board of Trade from Nov. 13, 1922, to Nov. 25, 1922, inclusive.

	Nov. 13	Nov. 14	Nov. 15	Nov. 16	Nov. 17	Nov. 18	Nov. 20	Nov. 21	Nov. 22	Nov. 23	Nov. 24	Nov. 25
December Wheat	1.16⅜	1.18	1.19¾	1.20½	1.20½	1.21¾	1.21¾	1.20½	1.20¾	1.18	1.19	1.18⅜
May Wheat	1.15¼	1.16¼	1.17⅛	1.17⅝	1.17⅝	1.18⅝	1.18¾	1.18¼	1.18¾	1.17¼	1.17⅝	1.17
July Wheat	1.06	1.06¼	1.08⅛	1.09⅛	1.09⅛	1.10	1.10	1.09½	1.09⅜	1.08½	1.08⅝	1.08⅛
December Corn	0.68⅞	0.70⅜	0.71¼	0.72¼	0.71⅞	0.71⅞	0.71⅞	0.71⅞	0.71¾	0.71	0.71	0.70½
May Corn	0.69¾	0.70⅜	0.71⅛	0.72	0.71½	0.71¾	0.71⅜	0.71½	0.71⅛	0.70½	0.70⅞	0.70¼
July Corn	0.69⅛	0.69⅞	0.70½	0.71½	0.70⅞	0.71	0.70⅝	0.70½	0.70½	0.69¾	0.70⅛	0.69⅝
December Oats	0.42½	0.43	0.43⅞	0.44⅜	0.44⅜	0.44⅝	0.44⅝	0.43¾	0.44⅜	0.43½	0.43½	0.43½
May Oats	0.42⅜	0.43	0.43½	0.43¾	0.43¾	0.44	0.43⅞	0.43½	0.43⅝	0.42⅞	0.43¼	0.43⅛
July Oats	0.39½	0.40	0.40⅜	0.40⅞	0.40⅝	0.40⅞	0.40⅝	0.40⅛	0.40⅛	0.39¾	0.40	0.39⅞
December Barley	0.66	0.68	0.68	0.68	0.68	0.68	0.68½	0.68½	0.68½	0.69½	0.70	0.70
December Rye	0.85	0.85⅞	0.88½	0.89¼	0.90¼	0.91⅞	0.91¼	0.89¼	0.89½	0.87⅞	0.87½	0.87
May Rye	0.85⅜	0.86⅜	0.88⅝	0.89½	0.90	0.92	0.91½	0.90¼	0.90¾	0.89	0.88¾	0.88

Quality of Canada's Wheat Must be Maintained

(By a Western Correspondent.)

There have been more complaints from western grain growers regarding the grading of wheat this year than for many years past, and upon a number of occasions the complaints have taken the form of accusing the Winnipeg Grain Exchange of being responsible for grades being too low. It seems almost incredible that any grain producer of the present day should assume that the Grain Exchange has anything to do with the grading of grain, it being a purely government function. However, in every case this season, where direct charges have been made, the Exchange have investigated the matter and all have proved that the producer was in error in stating that his grain should have graded higher. In several cases it was proven that the elevator companies lost money as the grain did not stand up to the grade at which it was taken in at the country elevator.

Another matter which seems to have been overlooked is that a grain grower is never obliged to accept the grade offered him by the country buyer. He has always the right to have samples taken and the grade sent to the official grading department at Winnipeg.

The cause of the very considerable amount of trouble about wheat grading lower than it should do, is due to the very mixed seed which is being used on many of the farms in the West. This means a number of berries of different size, shapes and colors which materially affect the grade. Not only that, but there is no doubt it is beginning to affect the milling quality of our wheat also. The attention of farmers has been repeatedly drawn to the pernicious habit of having mixed varieties of wheat in the same field, and now many districts are likely to suffer considerably from the very large amount of Durum wheat which has been grown the past two years. The mixing of Durum in hard spring wheat affects the milling quality very materially and makes the flour undesirable. Many of the varieties grown are hybrids that are not of high milling quality and affect both milling quality and the grade of wheat.

There has also been a great deal said about dockage for weeds, and this should arouse the grain growers of the West to the necessity of a united campaign to check the weed menace. In this connection both millers and elevator operators can render invaluable assistance to the country by urging upon the grain producers with whom they come in contact, the desirability of securing and making full use of some of the first-class grain cleaning machinery available. Such an investment in time will pay for itself, for it will save the grain grower freight charges to lakes head on weeds and small seeds, which are worth practically nothing.

It is a matter of the utmost importance that the quality of Canada's grain should be maintained, for if the magnificent standard which is now recognized throughout the world was permitted to deteriorate not only would it result in a serious curtailment of wheat export business, but worse still it would lead to the creation of a prejudice against Canadian flour in foreign markets, and upon the development of which time, labor and money are being expended by the Canadian milling industry.

It is of the greatest importance that our present grading system should not be relaxed, for by exercising the most rigid inspection standards will the great surplus which this country has to sell, find a market in the United Kingdom. Overseas buyers recognize the Canadian government certificate as being completely satisfactory as a guarantee of quality in cases where grain is shipped from Canadian ports. Upon the other hand, as is shown, there have been a number of cases in recent times where Canadian wheat shipped to the United Kingdom through American ports, more particularly Philadelphia and Baltimore, has been tampered with, and inferior grain introduced en route.

Might Affect Volume of Trade

In view of the very large quantities of Canadian wheat which have been reaching the United Kingdom, via the United States, there is the possibility that the realization of the true position may unfavorably affect the volume of trade, but in any case as it is of supreme importance that the high reputation the quality of Canadian wheat has gained should be jealously guarded, and as our government certificate is accepted as a guarantee of satisfactory inspection, it is clear that every effort should be made to ship direct from Canadian ports. In fact, quality, price—and in this connection cheap transportation is essential—and efficient grading and inspection are the four considerations that must be borne in mind. Producers of wheat must remember that the great bulk of our wheat has to be exported and that in order to export we must meet the requirements of the export market. The British market is satisfied with Canadian grades and is willing to buy on these grades and any attempt to do away with the present system of grading would have a very disastrous effect on our export trade.

C. P. R. LOADINGS SHOW INCREASE

Winnipeg.—Exceeding by 13.4 per cent. the number of cars loaded from the commencement of the crop year up to and including November 15, 1915, the total Canadian Pacific cars loaded in the western district with all grains in the corresponding period of the present season, is reported by officials of the company as 79,365, against 69,957 cars in 1915, and 53,492 cars in 1921. This makes a record average loading per day of 1,260 cars for that part of the crop year which has passed.

Toronto.—Operating with a speedy electric drill and high explosives, expert cracksmen blew a safe in the Maple Leaf Milling Company's office in Hamilton recently. All the burglars got for their pains was $25.00, which had been left in the safe.

Fort William.—Word has been received here that Mr. J. P. Kenny, who was recently in Chicago promoting the Fort William Sample Market and Produce Exchange, is now in New York on the same errand and is meeting with gratifying results.

The Elevator Operator

U. S. VESSELS MAY LOAD CANADIAN GRAIN FOR STORAGE DURING WINTER

Ottawa.—Permission to American vessels to ply between Canadian ports for the carriage of grain on the last trip of the season has been granted by the Government as repeatedly forecast. The vessels will be allowed to carry grain only and it will be stored up as cargo for discharge during the winter.

An explanatory memorandum says:

"From time to time the Department of Trade and Commerce has had attention directed to the possibility of a very serious congestion of grain at the lakeports. The past season has produced a very large crop in the Prairie Provinces and although the transportation companies have been operating at maximum capacity and have taken care of this movement in an exceptionally capable manner nevertheless it has become evident recently that serious congestion is bound to occur if the movement is confined to present shipping facilities. The Government has been carefully investigating the situation in all its bearings and after mature deliberation has come to the conclusion that it can be materially assisted by allowing other than Canadian vessels the privilege of loading and storing cargoes and of discharging the same at bay ports during the winter or early spring and in this way assisting in relieving the congestion and augmenting the storage facilities. The Government deems it desirable to adopt this course in order to increase the volume of storage to as great a degree as possible and as pointed out above to avoid any indication of congestion at prairie points which is inevitably followed by a deflation of prices where congestion occurs."

It is questionable whether the Government will seek enabling legislation next session to suspend the coastal laws at any time. Such an act would give rise to strong opposition.

CANORA (SASK.) FEELS CAR SHORTAGE

Canora (Sask.)—Shortage of cars for the transportation of this year's crop is being felt severely at Canora. All the elevators are practically full and at least one has been obliged to close temporarily until the situation is relieved. The N. Bawlf Grain Co., Ltd., which has an elevator at this point, owing to car shortage and in order to find increased accommodation for the incoming grain has leased the elevator adjoining the Canora mill, which has recently been operated by Messrs. Karsakoff and Holdhoff. The elevator has a capacity of 32,000 bushels and the local congestion will be relieved to that extent. Both farmers and grain buyers hope, however, for a more adequate supply of cars in the near future.

FINAL RUSH FOR CARGOES

Fort William.—With the close of the regular period of navigation almost at hand, there is a concerted demand at lower lake ports for ships to take grain down the lakes and good prices are being offered.

MESSRS PARRISH & HEIMBECKER OPEN FIRST UNIT OF NEW ELEVATOR

Fort William.—Messrs. Parrish & Heimbecker's new private elevator at Port Arthur is now open for business. While planned for an ultimate capacity of 1,000,000 bushels, which will be completed next year, the first unit to be opened has space for 300,000. The new elevator is complete and up-to-date in every feature. It comprises a working house 42 x 46, storing tank annex 45 x 69, drier and boiler house 28 feet long, and also a track house. The working house is over 184 feet high from basement to roof, while from the basement to top of storage tanks is 107 feet, and to the distributing floor 116 feet. The construction of the tanks is concrete, each one having a capacity of 25,000 bushels, with a diameter of 24 feet 3 inches.

The working house has two elevator legs with provision for a third; the elevating capacity at present is 30,000 bushels per hour.

The mechanical and structural details of the elevator combine all the best and latest ideas in this class of architecture. Several improvements, such as on the tripper for the conveyor belts, have been installed. The construction was done by Messrs. Jas. Stewart & Co.

Mr. W. L. Parrish, the head of the firm, and one of the pioneers in the grain trade of the West, visited Port Arthur, to supervise the details of opening. The plant will be managed by Mr. Ellis. It is located on both railroads and has unexcelled water front facilities.

OLD DAVIDSON & SMITH ELEVATOR AT PORT ARTHUR UNDER NEW MANAGEMENT

Fort William.—The Davidson and Smith elevator, in Port Arthur, which has been idle since the beginning of the 1922 grain season, is being operated again, the control of this house having been taken over by the Inland Seas Grain Company, a new corporation. It will be operated under the management of Mr. J. P. Jones, formerly member of the Dominion Grain Board, and now manager of the Consolidated Elevator Company, Ltd.

Whether the new company is operating as purchasers or lessees has not been stated, but Mr. Jones said that it was the intention to start the elevator immediately.

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Elevator, Mill & Personal Notes

Kingsville, Ont.—The factory of the McIlroy Belting Works of Canada, Ltd., is now running steadily. This company are the original manufacturers of stitched cotton belting and solid woven cotton belting, impregnated with a compound known as mineral rubber. This compound preserves the cotton from mildew and decay. It also makes the belting waterproof.

Sylvan Lake, Alta.—Messrs. Voss Bros., of Calgary, are employing a considerable number of men here on the construction of the new Terwillinger elevator. Mr. H. McDougall is foreman in charge of the local work. An office building, engine room and coal shed is also being constructed for the Terwillinger Company.

St. John, N.B.—The grain elevators of the Canadian Pacific Railway in the harbor have commenced to store grain which is being rushed from the West at the rate of 30 cars per day. The first steamer with grain left here about the middle of November.

Shanghai, China. — The Department of Trade and Commerce has opened sales rooms here for the convenience of Canadian flour and grain exporters.

Weyburn, Sask.—A large flour and feed warehouse of 60 carloads capacity is being erected here for the Maple Leaf Milling Company, Ltd. The company recently purchased the Federal Grain Company's local elevator.

Bloomfield, Ont.—A 25-barrel Midget Marvel Mill, purchased from the Pollard Manufacturing Company, Niagara Falls, Ont., has been installed by the Bloomfield Milling Co-Operative Company, and is giving excellent results.

Ottawa.—The Inland Seas Elevator Company, Ltd., which is now controlling the Davidson & Smith feed mill and elevator at Port Arthur, Ont., has been capitalized at $100,000.

Fort William.—The Bole elevator, which was damaged recently by the collapse of a shipping bin is again in working order.

Assiniboia, Sask.—Messers. Alderson & Olson, of Lafleche, Sask., are completing the installation here of a 50-barrel XXth Century Mill equipment and a 15 h.p. Bessemer Fuel Oil Engine, purchased from the Canadian Allis-Chalmers Company, Ltd., Toronto. This is the third XXth Century Mill that has been installed in the Lafleche district by Messrs. Alderson and Olsen. ù

Fort William.—The Inland Seas Grain Company has taken offices in the Grain Exchange Building. The new company, which has assumed control of the Davidson & Smith elevator in Port Arthur is under the management of Mr. J. P. Jones, formerly a member of the Dominion Board of Grain Commissioners.

Dawson, Y. T.—Canada's cereal producing area has been extended to the Yukon. Flour made from Yukon grown wheat is on sale in Dawson. Mr. James Parr, superintendent of the Dominion Experimental Farm, near Dawson, this season raised a fine crop of wheat, which he milled into high-grade whole-wheat flour.

Mr. W. R. Bawlf, president and manager of the N. Bawlf Grain Co., Ltd., spent a couple of days in Minneapolis recently.

Mr. H. R. Baird, of Messrs. Baird & Botterell, grain commission agents, Winnipeg, has returned home after a three weeks' visit to Montreal, New York, Chicago, Milwaukee and Minneapolis.

Mayor Frank Fowler, of Winnipeg, who is manager of the Winnipeg Grain Exchange Clearing Association has resigned from the mayoralty owing to pressure of private affairs. Mayor Fowler succeeded the late Mr. Edward Parnell, the well-known baker as Winnipeg's chief executive.

Canadian Fairbanks-Morse Co., Ltd., recently sold to the Bishop Milling Co., Biggar, a 25 h.p. type "Y" Oil Engine, to replace an ordinary 20 h.p. kerosene engines.

Mr. H. P. D. Trickey, manager of the Short System Milling Department of Canadian Allis-Chalmers, Limited, Toronto, is making a business trip through western Canada.

Mr. C. R. Conkey, of the Fegles Construction Company, Ltd., returned to Fort William recently from a trip to Winnipeg.

Dr. W. L. McDougald, president of the Montreal Harbor Commission, predicts that shipments of grain through the port of Montreal before the close of navigation this year will total close on 160,000,000 bushels.

Mr. David F. M. Chalmers, of Danilquin, Riverina, Australia, who is interested in the Australian grain trade was a recent visitor at the head of the lakes. Mr. Chalmers stated that the bag system of handling grain was in vogue in Australia, but that it was felt generally that the time had come for a change and that Australia would eventually have an elevator system similar to that existing in Canada.

Mr. Alex. Reid, of London, England, formerly president of the Western Terminal Elevator Company, Ltd., at the head of the lakes, and an associate in the Samuel Sanday Company of London, which concern has a controlling interest in the company, was a recent visitor at Fort William on his way to Winnipeg.

Mr. G. R. Duncan, M.Sc., of Fort William, Ont., was in Toronto for several days recently completing negotiations for the building of two additional grain elevators at the head of the lakes. The deals, he said, were practically completed. The two new elevators will both be among the customers of Hydro power.

Mr. Albert Copeland, head of the Copeland Flour Mills, Limited, at Midland, Ont., was a recent business visitor to Toronto.

Mr. George Shirk, of Messrs. Shirk & Snider, millers, Bridgeport, spent a few days in Toronto recently.

Mr. R. D. Lewis, formerly of the Dominion Wheat Board at Winnipeg, has joined the head office staff in Toronto of the Maple Leaf Milling Company in the capacity of accountant and will have charge of the office staff.

The Development of the Flour Milling Industry

(Contributed)

Without question the milling industry is one of the oldest industries known to man. Very little is known as to what methods were employed previous to about a thousand years before the Christian era, but several articles have been written by noted historians proving that grain was grown for human consumption as far back as records are available.

The first method employed for milling grain was very crude. Two stones were commonly used, one stone being slightly hollowed out to hold the grain while being crushed or rubbed by the upper stone. As man became more expert in providing for his wants the lower stone was artificially hollowed out and the upper stone rounded off to fit it. This method was gradually improved on till the two stones assumed the form of a mortar and pestle. The

A TYPICAL COUNTRY MILL

The Wilson Mill at Brooklin, Ont., now seventy-five years old.

next step was to bore a hole in the side of the lower stone through which the powdered grain could pass. This saved the necessity of having to empty the lower stone and also saved labor. In some eastern countries these mills are still in existence and are still operated by hand.

First Use of Horses and Oxen

As civilization advanced, so did the milling industry, and millers began to look for some means of power whereby the cost of milling could be reduced. The first step was the use of horses or oxen. Generally speaking, the mill driven by horses or oxen consisted of a large flat stone slightly hollowed to the centre. In the centre was a post of wood or iron. The upper stone was round in shape and revolved around an arm extending from the centre post. At the outer end of the arm the oxen were hitched. The stone being free from this arm revolved as the oxen travelled around the mill. The next step was the employment of water power and wind power. Up until this time there was no commercial milling attempted. Before the introduction of animal labor every family had its own mill. When animal labor, etc., was introduced the idea of a community mill was established. This mill was usually run by the chief or lord of the estate, or by some privileged member of the community. Not unfrequently was

MODERN MILLING MACHINERY

The rolls-sixteen double stands in the Hunt Bros. mill at London, Ont.

the village priest the miller. As these estates were gradually broken up the mills passed into the hands of private owners. During all this period of the developing of the milling industry the wheat was purchased by barter, very little being bought outright for commercial milling.

MODERN MILLING MACHINERY

The bran duster and purifiers in the Hunt Bros. mill at London, Ont.

From the old flat stone there gradually developed the stone mill which was used the world over up until about 1865. The old stone mill was a me-

chanical contrivance of the greatest precision. It generally consisted of a pair of stones about four feet in diameter, the lower one fixed while the upper one made to revolve at a high speed. These stones were assembled from pieces of a very hard stone, of which France was the base of supply. The pieces were cemented together and patiently chipped until they fitted one another exactly. The surface of the lower stone was grooved so as to lead the flour to

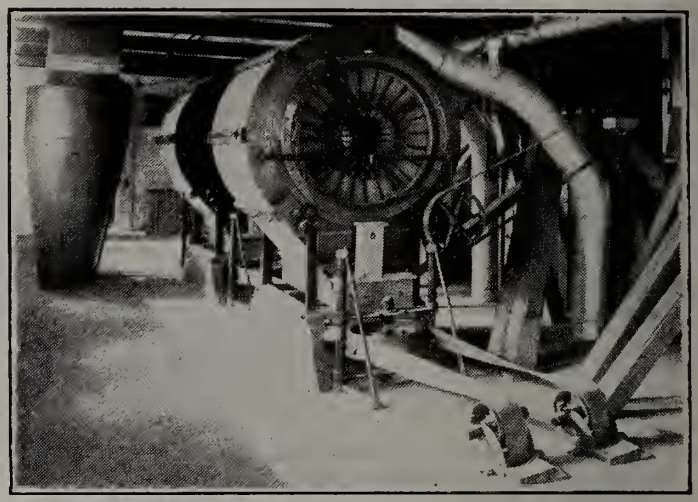
A TYPICAL COUNTRY MILL

Plant of the Manitou (Man.) Milling Company at Manitou, Manitoba.

escape from between the stones at definite places where it was received for further treatment. The grain was fed through a hole at the centre of the upper stone. The upper stone was balanced so as to leave the smallest fraction of an inch between the two stones. This suspension was a matter of the greatest precision. To balance a stone weighing over half a ton so that when it is revolving at a high

miller was to set his stones so as to grind the flour to a fine powder without breaking the husk more than was necessary. The kernel should be finely pulverized and the husk flattened out between the stones which should rub off all the particles of kernel

MODERN MILLING MACHINERY



The dust collecting house of the William Knechtel & Sons mill at Hanover, Ont.

adhering to the husk. If this ideal was obtained it meant that the mill would yield a large percentage of fairly white flour and a relatively small percentage of offals. In the majority of cases this result, or ideal, could be more or less obtained because of the fact that up to that time the greater majority of wheat produced was more or less soft, the miller had to work with the wheat, the husk of which was

A MODERN CEREAL MANUFACTURING PLANT

The Quaker Oats Company new mill at Peterboro, Ont.

rate the distance between the stones to be about the thickness of the skin of the grain and no more over its entire surface of about twelve square feet was an achievement of no mean order. These mills were generally driven by water power, wind and in some cases steam. The product from the rolls was then treated by sifting through sieves of finely woven silk or bolting cloth. The coarser parts of the wheat berry thus separated was sold for feed, according to the various degree of fineness. The ideal of the tough and the kernel soft. Very little grinding was necessary to reduce the kernel to the required degree of fineness and the husk would stand quite a bit of screening without being itself unduly pulverized.

More Grinding Required

Early in the nineteenth century, however, international trading in wheat began to assume considerable proportions, and around 1870 it was estimated that half the quantity of wheat required for home

consumption in England was imported. Many of the wheats imported were of a harder variety, consequently, they required more grinding, and the result was with the brittle husk the color of the flour deteriorated somewhat because of the fact that owing to the extra grinding necessary some parts of the brittle husk were finally pulverized and could not be separated in the process of bolting. Even up to this period there was very little international trading in wheat flour, the wheat being imported and ground locally.

About this time (1870-75) there was devised in Hungary a steel roller mill which produced a very white flour. This steel roller process again demonstrated the aptitude of man for adapting himself to conditions as the wheat then grown in Hungary was of a hard kernel and very thin-skinned variety.

Until this period the countries which relied on imported wheat for their supply were fully satisfied with the dark flour, and subsequently dark bread, but by the use of the steel rollers a very white flour was produced which when compared with the home milled product at once ousted the domestic miller from the market. This was the beginning of international trade in wheat flour. As a result the milling industry and live stock interests in importing countries were faced with a very serious situation. The importation of flour instead of wheat practically ruined the milling industry for the time being. Thus the supply of feeding stuffs available decreased enormously. Also, the farmer felt the change in conditions as the demand by the public for bread made from imported white flours to some extent depreciated the value of the home-grown wheat. The millers, therefore, to meet economical conditions, had to practically reorganize their industry, and in 1913 it was estimated that 90% of the flour used in the chief wheat bread eating countries was a product of the steel roller mill. This condition also resulted in a very keen competition, the result being that in the last thirty-five years tremendous strides have been made on the old original invention of the Hungarian millers, and international trade in wheat flour has developed to the stupendous proportions which is now evidenced by statistics available for all the chief countries. All this development has taken place within the last fifty years.—F. C.

CANADIAN LINK BELT CO.'S NEW CATALOGUE NO. 400 A USEFUL VOLUME

(See Illustration Below.)

A four-page circular letter advertising the publication of their new general catalogue No. 400 has been issued by the Canadian Link Belt Company, Ltd., Toronto. The circular extends an invitation to engineers, superintendents and purchasing agents to send for a copy, and provision is made on the last page of the circular for the making of eight separate requests.

The two inside pages of the circular are devoted to an illustration of the catalogue, which is shown below in miniature. As the illustration on the circular is in color the effect is striking. Indeed, the idea which advertises the catalogue, which latter is of itself a splendid advertisement for the Canadian Link-Belt Co.'s, Ltd., products, is very cleverly worked out.

Those interested can obtain a copy of the new catalogue No. 400 on application to the Canadian Link Belt Company, Ltd., at their Toronto office, at Wellington and Peter Streets, or at their Montreal office at 10 Gauvin Lane.

RAPID GRAIN HANDLING AT LAKES HEAD

Port Arthur.—Port Arthur and Fort William, mediums of traffic and elevator facilities are working with ease and rapidity and every record of the past is being broken in shipments that average from two to three millions of bushels daily. The congestion which has been improperly associated with local ports, actually exists at lower lake ports where the difficulty is in shipping to the seaboard.

Local transportation experts point out that by the failure of transportation routes of the east to take care of the offering from the west, the western farmer this season is losing millions of dollars on his crops. Long delays in unloading are resulting in higher carrying charges and the rates from the head of the lakes has advanced from a normal rate of six to ten cents to twenty cents a bushel for grain shipped to the seaboard.

(Illustrating Link-Belt Catalogue No. 400.)

The Determination of Ash Content in Flour

By S. J. Lawellen*

(See Cut Page 19.)

The determination of ash in flour was one of the first chemical determinations to be made use of by the miller. Even to-day the importance of this test is readily acknowledged in all mills of sufficient capacity to maintain a laboratory. As the determination of ash is more important to the miller than any one else concerned we will deal with the determination of ash in the laboratory and its value and use by the miller. The use of ash values of flour by the baker and the salesman will be touched upon lightly but merely to express our personal opinion and not as a matter of argument.

Taking up the determination of ash in the laboratory we will first consider equipment and methods. For the actual burning an electric muffle is generally used. Many kinds are quite satisfactory but they should be of rugged construction and durable. In size they should be large enough so that only about one-half of the sole will be covered by the crucibles of an ordinary day's run. An electric muffle will generally give better and faster results when handling about fifty per cent. capacity. Gas fired muffles may be used and, if handled properly will give equally as good results. In a daily comparison, lasting several weeks, between an electric muffle and a gas fired muffle, satisfactory duplicate checks were secured throughout the entire trial. All tests were handled personally and burning conducted in uniform manner. The time on the different ovens varied and was about three hours for the gas oven and five for the electric. The main reason for the greater use of the electric oven is that it is much easier of regulation and the burning of samples from day to day will be much more uniform.

Analytical Balances

In the way of analytical balances only the best should be used. Balances should be tested every day for correctness of zero point. Occasionally they should be tested for sensitiveness and kept in excellent working condition. It is needless to say that weighings should be made accurately and it is just as essential that they be made rapidly. When two balances are of equal accuracy the one allowing of more rapidity is always the better balance. From two to five grams of material are weighed directly into porcelain crucibles. If weighings are not made rapidly the loss of moisture during weighing may be enough to cause some error and when duplicates are run this error may be considerable. All ash determinations should be made in duplicate and a sample for moisture determination weighed up at as near the same time as possible. Ash determinations should never be run without moisture also being determined. In ash work, as well as all analytical work, the room should be as free as possible from dust and draft.

In placing crucibles in muffles they may be placed quite close together but should not touch. Considerable difference of opinion exists as to proper temperature of muffle during burning. Where no pyrometer is used, the generally accepted standard temperature for burning is when muffle is at dull cherry red. Personally we prefer that ash samples be in muffle some two hours before this temperature is reached. Too much emphasis cannot be placed on the advisability of using a pyrometer with the muffle. The pyrometer with automatic regulation allows of a constant temperature and eliminates all guess work and differences of opinion as to just what "dull cherry red" means. With a pyrometer it requires only a few trials to determine the best temperature and time for your ash and muffle and then these standards can easily be maintained without any guesswork and in spite of current fluctuations and other influences.

Methods of Analysis

Coming to the subject of Methods of Analysis we strike deep water. It is not for us to say personally what is the best method. This can only be told by many experiments. After many years of work and experiment the American Association of Cereal Chemists have accepted a Standard Method to be used by members. As the majority of these members are in flour mills the method adopted has been found to be the best for this purpose. The recent action of the Kansas Millers' Club in backing and assisting their chemists in the matter of Standard Methods is certainly to be commended. The fight for Standard Methods was taken up by the A. A. C. C. some seven years ago and still is being carried on vigorously. The Standard of Official Method for Ash as adopted by the A. A. C. C. is as follows: "Weigh from 3 to 5 grains of sample into tared crucible and ignite in muffle furnace at low red heat until the ash becomes white or gray-white and free from carbon. Avoid fusing the ash. Cool in a dessicator and weigh. Calculate to per cent. ash."

This method is designed to meet the exact conditions and requirements of flouring mills and cereal laboratories exclusively and does not cover the entire field to which the ash test may be put.

One Method Adopted

The Association of Official Agricultural Chemists have adopted an Official Method for Ash as follows: "Char a quantity of the substance, representing about two grams of the dry material and burn until free from carbon at a low heat not to exceed dull redness. If carbon-free ash cannot be obtained in this manner, exhaust the charred mass with hot water, collect the insoluble residue on a filter, burn till ash is white or nearly so, and then add the filtrate to the ash and evaporate to dryness. Heat to low redness till the ash is white or grayish white and weigh."

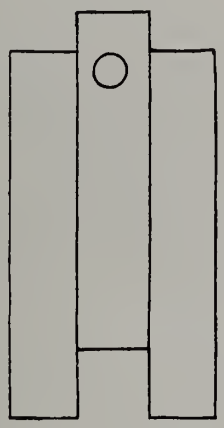
(To be Continued.)

* Address delivered before the 1922 convention of the American Operative Millers' Association at Kansas City and republished by courtesy of the Journal of the American Association of Cereal Chemists of which Mr. Lawellen, now in charge of the cereal chemistry department of the Milton Hersey Company, Ltd., Paris Building, Winnipeg, is president.

THE PRACTICAL MILLER

CATCHING TRASH IN THE GRAIN

In the accompanying sketch is shown a regular slide such as is used in spouts, bins, etc. It will be seen that if a wide or large slide is opened, the opening will be narrow and long, and that straws or at least a bit of trash will cause clogging. By gaining in on the large slide and placing a small slide in the large one all granular material, trash included can be caught.



In other words, the small slide would function satisfactorily if there was trash two inches in size in the grain while if the large slide was used an obstruction half an inch in size would stick. The large slide is retained in case of a very large obstruction coming on to be let out. Plough out the large size slide and try a small one for effectiveness.

PECULIARITIES OF DUST EXPLOSIONS

Much has been written of late about the explosibility of dust. Many heretofore skeptics are now ardent supporters of the "dust explosion movement" and are doing all in their power to put dust explosions down for all time to come. Many have made a study of the subject—and those familiar with the theory know that a mixture of finely divided dust suspended in the air is very similar to the mixture of ordinary illuminating gas that pours from the gas fixture, or the highly explosive mixture of gasoline and air that is introduced into the cylinder of our gasoline engines.

An electric spark or flame introduced into any of the above mixtures will produce an explosion — an explosion the violence of which will be proportional to the density of the mixture and the resistiveness of the container. An explosive mixture of dust and air differs slightly from a mixture of gas and air or gasoline and air in one particular — namely the dust particles are visible to the naked eye whereas in the two latter cases this is seldom true. More often is this true when a stream of sunlight is admitted into the mixture. Illuminating gas has a very pronounced smell and in the majority of cases its presence can be detected in a room—whereas a finely divided mixture of dust and air would be seldom detected except as it at times would affect the throats of those not used to breathing such dense dusty atmospheres.

FITTING WIRE GUARDS

In putting up guards it is always best to have them as neat as is possible and have them effective, and also to have them occupy as little space as possible. In this state the openings allowed in a guard are one-half inch. In many places guards can be best made by tacking wire with half-inch mesh to wooden supports. This makes a neat looking and effective guard and one that will pass inspection. The wire in many places is cheaper than wood, and where guards have to be at points where they shut off light the wire has the additional advantage that it shuts off very little.

DISCOUNTING DIRTY GRAIN

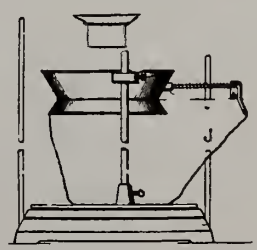
Dirty grain is always discounted liberally in central markets so that the country shipper who does not discount the grower to take care of the dockage and the waste incurred in handling and shipping dirt and foul seeds is quite sure to suffer unexpected losses. It costs just as much money to handle dirt through an elevator and transport it to market as it does grain because when mixed with grain it is so classified by every new handler. And what is more, the presence of such foreign matter in grain increases the chances of the grain getting hot and spoiling and often detracts from its quality sufficiently to insure entire lot being placed in a lower grade.

In running your mill be sure to give each roll and bolter a full feed. See that each roll does its full share of the work, and always remember that you cannot bolt good flour out of the middlings unless that flour has been made by the rolls or middlings mills.

Milling and Grain Patents

A new bag holder, particulars and sketch of which are given herewith, is the invention of Mr. J. L. Morris, Crafton, Pa., assignor, The Morris Automatic Scale Company, Crofton, Pa.

In combination with a platform and spaced struts of a sleeve having ears embracing the struts, means



to maintain the sleeve at vertically secured, adjusted positions upon the struts, and an arm offset from the sleeve yielding radially relative thereto and provided at its outer extremity with means co-acting with the sleeve for supporting a bag in open position about the sleeve and the extremity of such yielding member.

THE PRACTICAL MILLER

THE EFFECT OF ACIDITY ON THE BAKING QUALITY OF FLOUR

From a scientific standpoint it is the increase in acidity which is the most vital factor affecting the baking quality of flour and according to Dr. F. L. Dunlap, consulting chemist of the Industrial Appliance Company of New York, the controlling factor is not the amount of acid but the intensity of the acid.

Speaking on the subject of "Acidity in Flour," at the 1922 convention of the Association of Operative Millers which was held at Kansas City, Mo., Dr. Dunlap said that if the quantity of acid in a patent and a clear flour was determined by chemical analysis there would be found to be more acid in the clear than in the patent. Yet, he said, the patent flour with its lesser quantity of acid was more intensely acid than the clear. From this it was learned that the quantity of acid in a flour was no guide to the intensity of acid.

Continuing, Dr. Dunlap said: All acids contain the element hydrogen in chemical combination. This chemically combined hydrogen is the most characteristic thing about all acids. All acids, in the presence of water undergo a change, wherein more or less of this chemically bound hydrogen leaves the acid and is found in the solution carrying a positive electric charge. These electrically charged hydrogen particles are called "hydrogen ions," and it is the quantity of these "hydrogen ions" which determines this factor of intensity. So we may have a comparatively large quantity of an acid in a flour, as in a clear, for example, but which acid has produced but a small number of these hydrogen ions; therefore, the intensity of acidity of the clear is small. In the patent flours, we have a less quantity of acid than in the clear, but the acid in patent flour contains more hydrogen ions, therefore the intensity of this acidity is greater than that of the clear.

Acid Intensity Affects Quality

The intensity of acidity affects the baking quality of flour through its control of the capacity of the gluten to absorb water and expand. This, in turn, is the factor which is of importance in determining what the viscosity of the dough will be. A dough, to produce the best baking results, must possess its minimum viscosity, so that if we can control the intensity of acidity, we can control the viscosity of the dough and hence give to a flour a capacity to produce the highest baking results of which it is capable.

Any means of producing such results, are of value to the miller of both Soft and Hard wheats, and of value to the baker, the housewife and, in fact, to all flour users. If such results are obtainable commercially, it will accomplish what aging accomplishes and in essentially the same way; for aging of flour, with its increase of the quantity of acid also produces, as time goes on, an increased intensity of acidity. Therefore with aged flour, we find that the flour bakes better and better until it reaches an optimum point where it has that intensity of acidity which scientific investigators have found to produce the best results. If the time of aging is still further prolonged, the intensity of acidity continues to increase but the baking quality begins then to decrease. So if flour is stored to age it, until it will give its optimum results, then it must be examined frequently in order to catch it at the peak, for this point will vary with different flours under varying conditions of storage.

Now we can understand why an over aged flour and a new flour neither of which gives the best baking results, can give better results than either alone, if mixed. The old flour is too intensely acid and the new flour has too little intensity. The mixture will give an intensity between the two and one nearer that necessary to give optimum baking results.

TEST FOR FLOUR ODORS

Every miller, of course, understands that flour will take up disagreeable odors from proximity in storage to certain substances. Sometimes these odors (which often become actual flavors) are not detected by the miller even if the odor is acquired in the mill. Usually the odors are imparted after the flour has left the miller's premises. But the baker often detects an unusual odor only in his dough and usually when it is warm. This has suggested to an English miller and a Scotch baker, that if flour is suspected of having acquired an odor, it can be detected by mixing a small sample in a small fruit jar or other suitable receptacle, with hot water. If there is an undesirable scent or odor to the flour, it will be perceptible in the steam arising from the mixed flour and hot water.

COLD AND WARM FLOUR

Flour is often stored in places where it becomes chilled in cold weather. If flour thus chilled is used in bread making without any preliminary treatment, the resulting bread may not be at its best. It seems to neutralize the action of the yeast and too much rising occurs in the oven. But it seems to be a mistake to warm the flour too much preparatory to bread making. The best way seems to be to let the flour warm up to the temperature of the room. Experiments made with flours that showed temperatures of 48, 98 and 70 degrees Fahrenheit, appeared to demonstrate that the latter was the best temperature for the flour. The flour warmed to 98 degrees gave a larger loaf than the flour at 48 degrees; but the flour at a temperature of 70 degrees gave a still larger loaf and the quality was the best of the three.

CANADIAN LINK BELT CO.'S CALENDAR

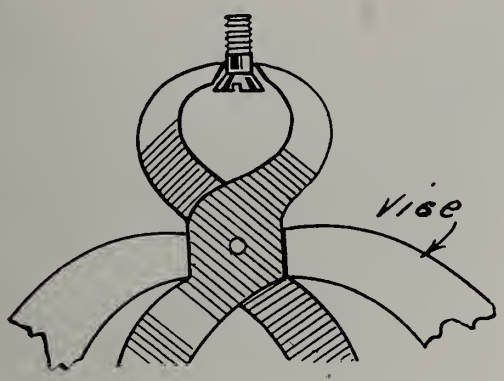
Copies of the Canadian Link-Belt Co.'s calendar for 1923 will be ready for distribution early during the present month. Applications for same should be addressed to the company's office at Wellington and Peter streets, Toronto.

The calendar measures 15½ x 24" and contains twelve separate full sheets. Each has an attractive illustration of Link-Belt machinery and equipment. Underneath each month's large calendar are shown the previous month and the succeeding month.

THE PRACTICAL MILLER

WHEN FILING SCREWS

A pair of pincers can be utilized as a vise for the shortening of bevel-headed short screws. The screws to be shortened are placed between the jaws of the



pincers which in turn is held in the jaws of a regular vise. Holding the screws in this way injures neither their heads nor their threads.

WHEAT FROM ANCIENT TOMBS

Prof. John Percival, who is professor of agricultural botany in University College, Reading, Eng., and the author of several works on agriculture has written the most comprehensive and scholarly book on wheat that has yet made its appearance. The work contains much interesting material that is not strictly of scientific or technical nature. One bit of interesting information is contained in the chapter on germination where he effectually disproves of all the stories told of the growing of wheat and other plants from seed obtained from ancient tombs.

Wheat grains of great antiquity, he says, have been unearthed from ancient stores and tombs in different parts of the world. Occasionally they have retained their form, where they have been dry and unaffected by atmospheric changes, and resemble forms grown at the present day. But always their interior structure is chemically disorganized, the proteins decomposed and the embryo shriveled. He says that sometimes modern grains have been inadvertently admitted into mummy cases from straw packing, while credulous tourists are often bamboozled by thrifty natives into buying vases filled with what is declared to be "mummy wheat." Prof. Percival describes experiments made upon wheat through many years to test the length of time it will retain its germinating capacity, which show that this rarely lasts longer than 10 years and is likely to be much less.

The United Kingdom obtained only 35 and 36 per cent. respectively of her wheat and flour from the United States during the first six months of 1922, as against 46 and 45 per cent. respectively for the same period in 1921.—Modern Miller.

FLOUR PRICES IN SYDNEY, N.S.W.

Sydney, N.S.W.—A strong difference of opinion exists between the representatives of wheat-growers and flour-millers in Sydney with regard to the future price of flour, and the possibility of an increase in the cost of bread to the consumer.

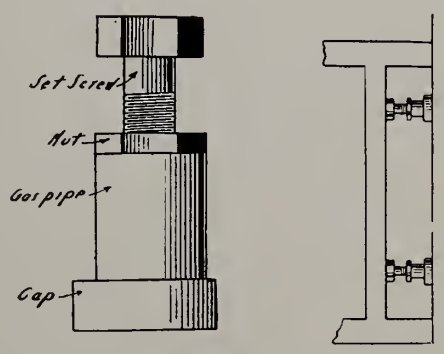
Millers complain that they are unable to purchase wheat from the Voluntary Wheat Pool, even though they offer as much as 5s. 11d. ($1.33½) a bushel, or considerably above the export parity in Sydney. This, they say, means paying more than 5s. 11d. for the wheat, with a consequent increase in the price of flour and of bread. They contend that the price for local consumption should be at least no more than the overseas parity.

Bakers, on the other hand, do not generally anticipate having to pay higher figures for their flour. They are reported to be well stocked, with the result that the local demand for flour is comparatively dull.

Indirectly, the allegations of the millers are replied to in the report of the Voluntary Wheat Pool. A man closely in touch with the operations of the pool, however, said recently that the millers were apparently complaining because they had not shown wisdom in their buying. The pool, he emphasized, was a purely voluntary one. There was still an open market side by side with the pool, and the millers were at liberty to go into the country and buy outside the pool. For at least two months, millers had had an ample opportunity of buying wheat on the open market at a much lower price than that ruling at present. He was not in a position to state definitely that 5s. 11d. a bushel had been refused for wheat for local consumption, but he pointed out that the wheat belonged to the growers, and if any profit was to be made, such as might be secured by selling flour overseas the growers through their pool were entitled to it.

JACK SCREW FOR TIGHT PLACES

A handy jack screw for close places where a regular jack cannot be used is made as shown in the accompanying drawing. In setting a machine this is more efficient than a lever, as a steady lift



is obtained and different sizes can be used with little or no expense. By holding the head of set screw and screwing up on the nut the machine is raised.

THE PRACTICAL MILLER

CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

HEAD MILLER WANTED.—A two hundred barrel mill in Ontario is open to engage the services of a first-class head miller; must be thoroughly reliable and able to get yield and uniformity; no other need apply. Will pay good wages to the right man. Reply Box 131, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal

POSITION WANTED by flour salesman in the Province of Quebec. Excellent connections in Quebec city and district. Has had several years experience, and has represented a number of leading firms. Can furnish best references. Reply Box 130, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—New copy of C. E. Oliver's "Miller and Milling Engineer." A leading text-book for the trade. Over 350 pages of everything pertaining to the installation of milling machinery and the manufacture of flour. For particulars as to price, reply Editor, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

FOR SALE—One 50-barrel Midget Marvel Mill, with Cleaner, Elevator, Heads and Boots, Belt and Buckets, Transmission. Guaranteed good condition. Reply Box 126, "Canadian Milling & Grain Journal", Phillips Place Building, Phillips Square, Montreal, P.Q.

WANTED—Position as Head Miller. Applicant has had twenty-five years' experience operating mills from 50 to 400 barrels capacity. Can furnish first class references. Reply, Advertiser, 222 Wychwood Avenue, Toronto, Ont.

MILL TO RENT — Constructed of brick, 45 by 90; also warehouse with holding capacity of three to four thousand bags of flour; storage bins; four double rolls, and full complement of machinery, in good condition. Situated on C. P. R. and G. T. R. Reply Box 129, "Canadian Milling & Grain Journal", Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED a reliable flour and feed dealer to furnish wheat for milling. Flour and feed from wheat supplied to be taken by dealer on commission basis. Quality of flour and yield guaranteed. Reply Arcola Mills, Arcola, Sask.

AGENTS WANTED to handle a high class Crude Oil Engine, suitable for Mills and Elevators. For full particulars write H. W., c/o "Canadian Milling & Grain Journal," Dubrule Building, Montreal.

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to be listed in the Free Milling Directory of Canadian Flour Mills, managers, superintendents, head and second millers, and engineers.

IF YOU WANT TO BE INCLUDED

We must have your name and other particulars on accompanying form. Kindly fill in and return promptly.

Superintendent .....
Head Miller .....
Second Miller .....
Name of Firm .....
Address .....
Daily Capacity .....
Power Used .....

THE PRACTICAL MILLER

The Question Box

With a view to making this department one of real service, "Canadian Milling & Grain Journal" cordially invites its readers to send in their problems to The Question Box. There are but very few millers or elevator operators who do not have worries in the proper conduct of their plants. It may be due to lack of experience or inability to trace cause and effect. The logical and sensible thing to do is to ask someone who may possibly know. Often he is not at hand, and still oftener the perplexed miller or elevator operator does not want to show his lack of knowledge. Under these circumstances he can address his inquiry to the craft through this journal. His name will not be divulged if he wishes to remain incognito. Someone is sure to reply who has had similar problems to meet or similar questions to ask. We guarantee to devote all the space necessary to the asking and answering of questions, so do not be backward in sending them in.

THE EDITOR.

QUESTION:—How many breaks should be used for best results?

ANSWER:—Four breaks for the average capacity mill and five for the larger mills; four breaks up to 150 bbls. capacity, twenty-four hours, then five breaks.

QUESTION:—Define the term "ash content."

ANSWER:—The ash of flour is that part which is left after burning the flour under certain conditions and is supposed to represent parts of grain contained in the flour other than the endosperm.

QUESTION:—Is the ash content in any way injurious to digestion?

ANSWER:—If the flour containing a higher ash content is not affected in such a way that the volume and texture of the bread are not affected, then the ash content would be a help to digestion. Otherwise, it would be injurious.

ED. NOTE.—The first instalment of an authoritative article on "Ash Content" by Mr. S. J. Lawellen, president of the American Association of Cereal Chemists and at present in charge of the Cereal Chemistry Department of the Milton Hersey Company, Ltd., Winnipeg, will be found on page 28 of this issue.

MANCHURIA'S FLOUR REQUIREMENTS

Dairen—The Manchuria Daily News publishes a statement to the effect that the total demand for wheat flour in Manchuria is between 50,000,000 and 60,000,000 sacks yearly, whereas the total output of the flour mills in that country is less than 20,000,000 sacks; therefore, to supply domestic requirements, it is necessary to import two-thirds of the flour consumed.

The decline in the flour-milling industry in Manchuria is due to the fact that native wheat is being exported and that American flour may be imported at relatively moderate prices. The article further states that the export of wheat from Manchuria is merely a temporary policy to relieve the congestion of accumulated stocks of grain, caused by the irregularity of the operation of the railroads.

The Duster

We read in an exchange that the murderer of an editor was sent down for life the other day, while a fellow that killed a grain grower got only five years.

Prospective murderers please take note.

TO-DAY'S BEST STORY

Mamie was thirty and still single. Her daily prayer was humble and short. "Lord", she said, "I ask nothing for myself but mother wants a son-in-law."

A German bank official absconded the other day with 70,000 marks. This, we understand, amounts to about 18 cents. Some "abscond."

Montreal Board of Trade plans to dine Sir Henry Thornton on his arrival in Canada to assume presidency of National Railway Board.

The gallant knight will need all the nourishment he can get to enable him to tackle the job ahead of him.

Rufus Redd Dogg

"WHUT between th' ten commandments on th' wan hand an' th' Re-vised statutes made 'n pervided, an' th' thousand an' wan regylations tellin' ye whut ye kain't do an' whut ye kin, th' letter bein' framed 'r concockted, whichever ye feel, m' a bunch 'f indemnity-lovers, th' average he-man ez faced with a thorny propersition", quoth Rufus Redd Dogg, owner and operator of the Redd Dogg Flour and Feed Mills of Squaw Creek.

"Et's a harrd thing," Rufus continued, "t' refrain fr'm usin' onheated langwidge, say, f'r instance, when Reddy Connors borries a hammer 'r a wrinch an' ye fergits t' ask him f'r et till th' crucial moment ye find y' want et, an' then t' go t' Reddy f'r et an' find thet he bust et an' wuz just goin' t' git et mended.

"An' ther's Wilt Henroot kin scorch th' paper offa th' wall when he turns on his opinion 'n things 'n gen'ral, speshially, revenoo officers. He don't seem t' be afeard o' anny fire 'r brimstone ez I kin notis."

"T' keep out 'f th' hoose-gow these times a feller 'd hev' t' be blind, deaf an' dumb an' hog-tied. Th' papers sez ez th' wurrld ez gettin' wusser all th' time, but fr'm whut I kin see 'f th' folks roun' Squaw Crick, an' I'll say thet all th' shennanigans don't go on 'n th' big puddles, thet humanity ain't ez bad ez sum peepel 'd make et out 't be. Ther' wuz only wan man who bruk all th' commandments at wanst, an' he wuz th' feller thet wrote em out. He musta bin good an' mad."

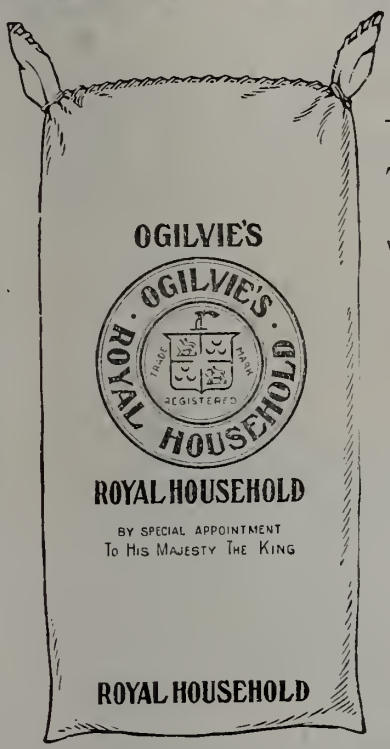
"F'r meself," concluded Rufus, "I never sez 'r does annythin' t' annybody thet I wudn't like 'em t' say and do t' me. Et mus' be a good hunch f'r I find et wurrks well."

BY SPECIAL APPOINTMENT
TO HIS MAJESTY THE KING

THE OGILVIE FLOUR MILLS CO.

LIMITED

HEAD OFFICE: MONTREAL, CANADA



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which are everywhere acknowledged to be

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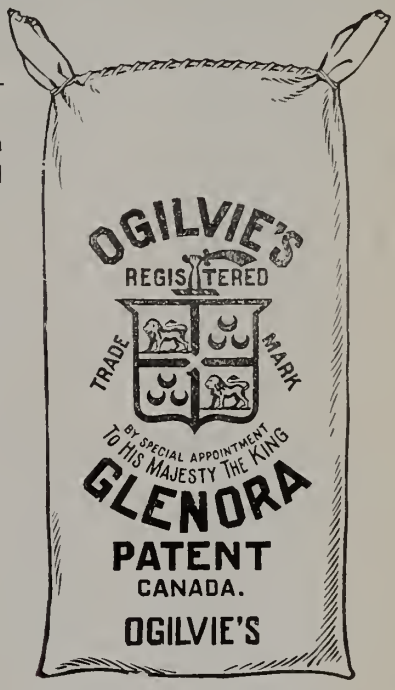

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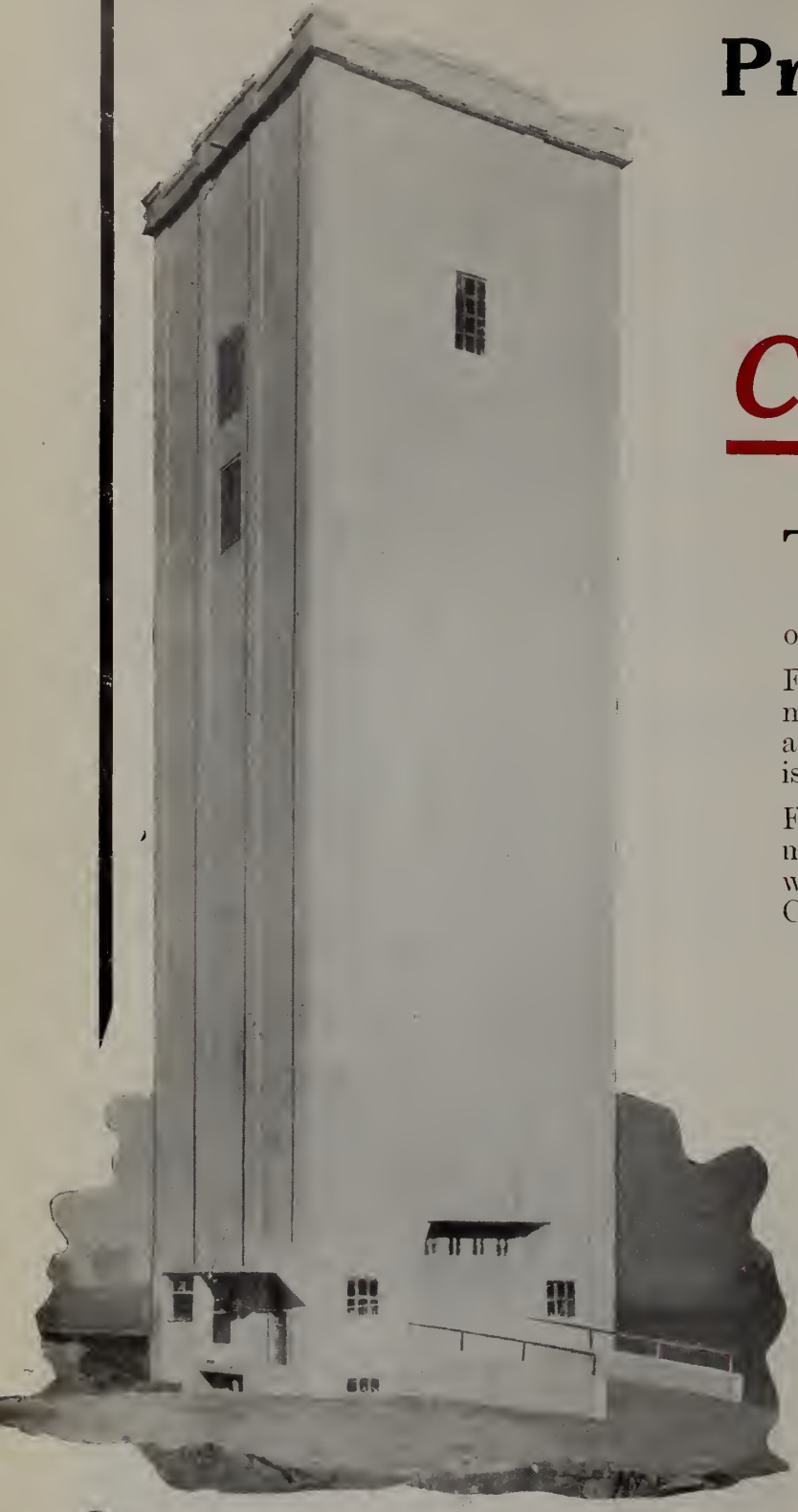
Mills at : MONTREAL, FORT WILLIAM, WINNIPEG, MEDICINE HAT

Daily Capacity, 22,250 Barrels



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in

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We Wish All Our Readers A Merry Christmas

CANADIAN Milling & Grain JOURNAL

VOL. III MONTREAL, DECEMBER 15th, 1922 No. 22

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Cockle gives a bitter taste to your flour, lowering the quality and making it off-color, so affecting its market price.

Boby's Indented Cylinders will solve this problem for you, separating Cockle and other small seeds from the wheat. We make machines for all classes of Separations.

Our service department is at your disposal to advise you on any separating problem you may have. You owe it to yourself to make use of this service

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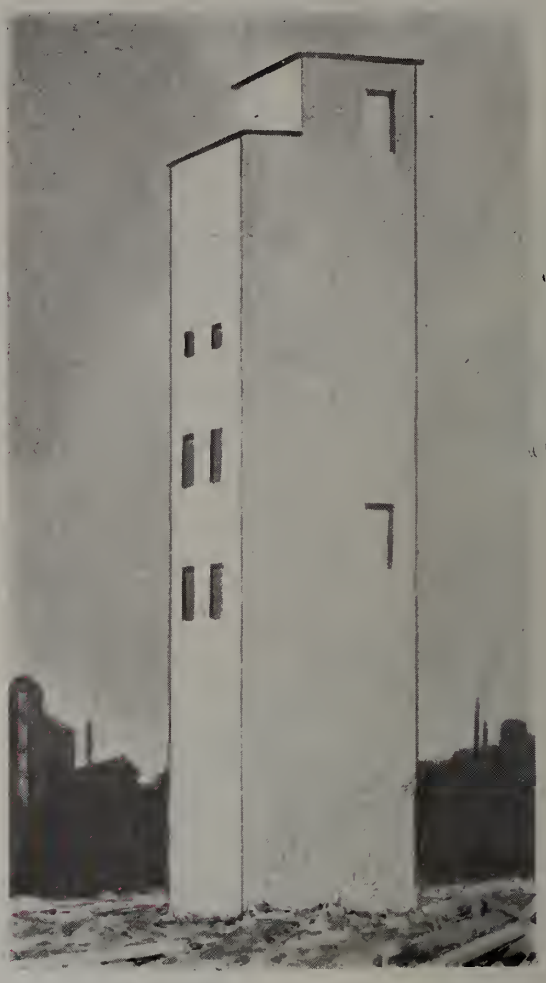
Realizing the importance of proper storage facilities, many large grain growers now ship their grain to a large elevator as soon as reaped—whereas, if they would build small Concrete elevators for themselves, they could themselves store the grain, and thereby take advantage of price advances that occur after the crop is in.

The durability—and consequent economy—of Concrete recommend it for almost any kind of structure; but its advantages are especially apparent for buildings in which grain is to be stored.

There are three great dangers that menace stored grain—all three of which will conquer most materials, but which meet their match in Concrete. These are Fire, Rats, Dampness.

To render the grain impervious to damp, to protect it against vermin, to safeguard it from fire—Concrete elevators are almost universally used.



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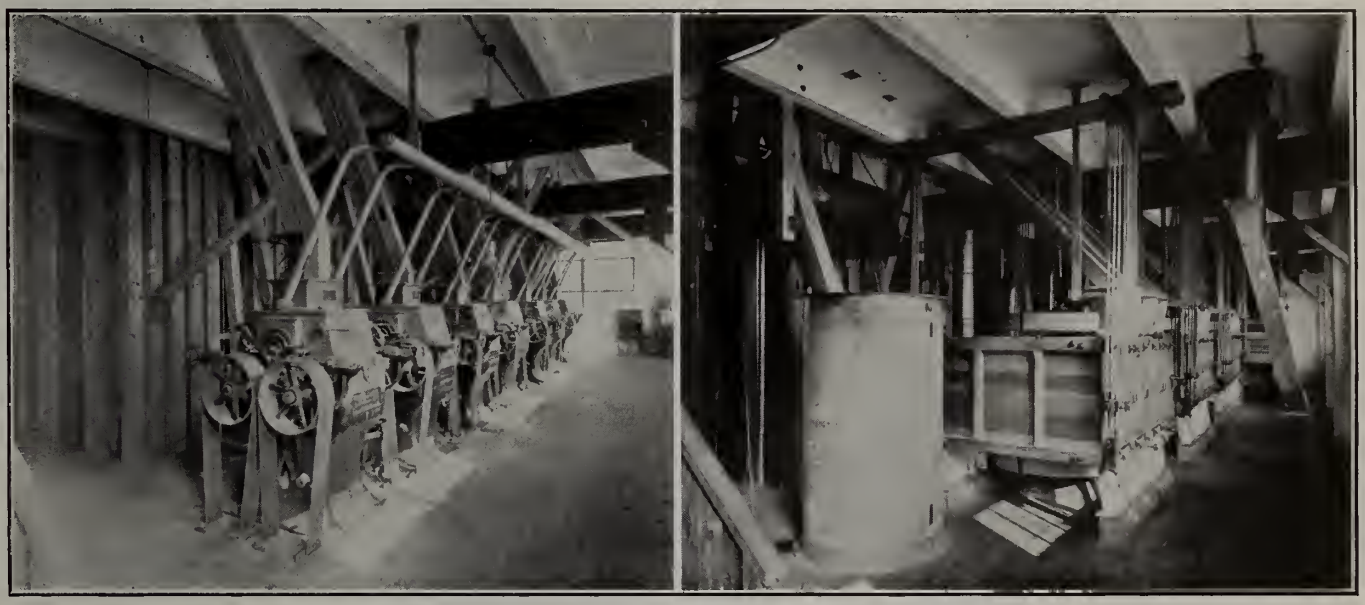
Continue to give satisfaction and good service not only on starting up but after years of operation.



Interior Views Knechtel Mill, Hanover, Ontario

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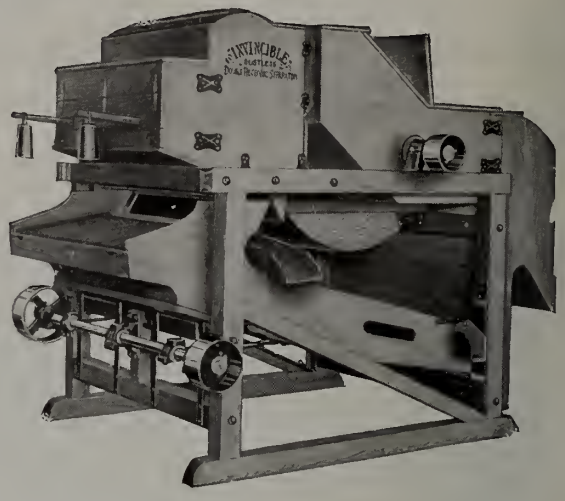

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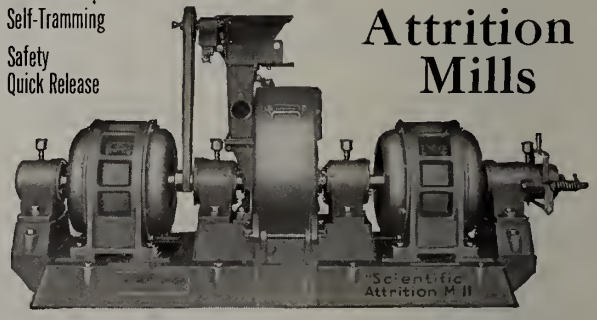

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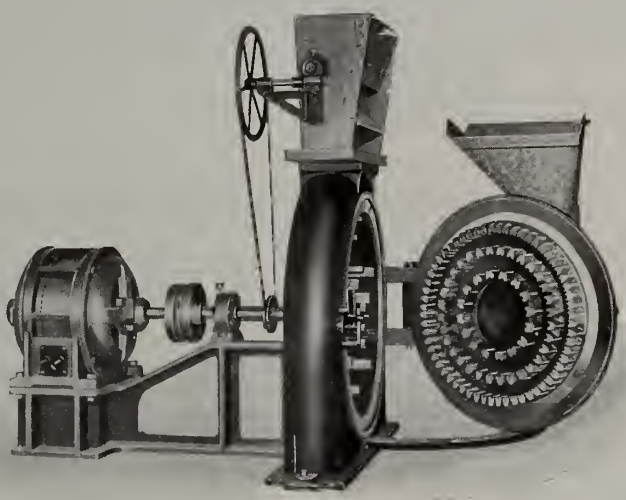

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Rates on application.

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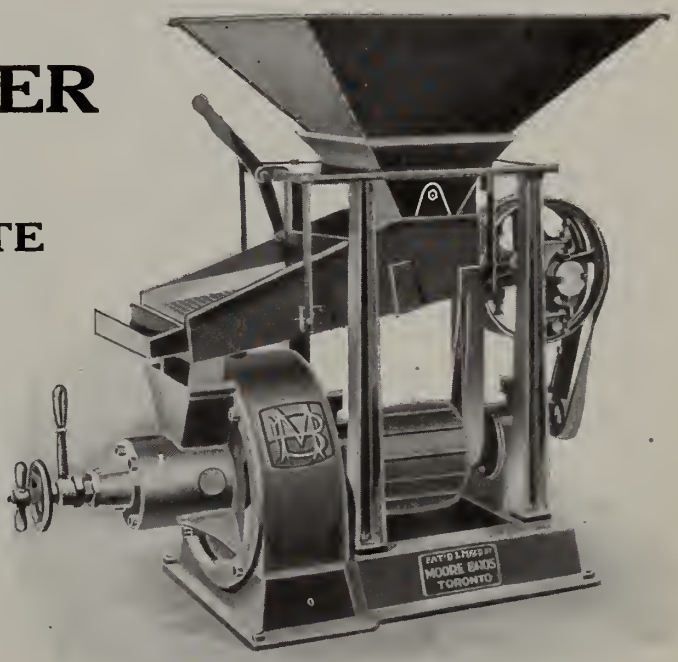

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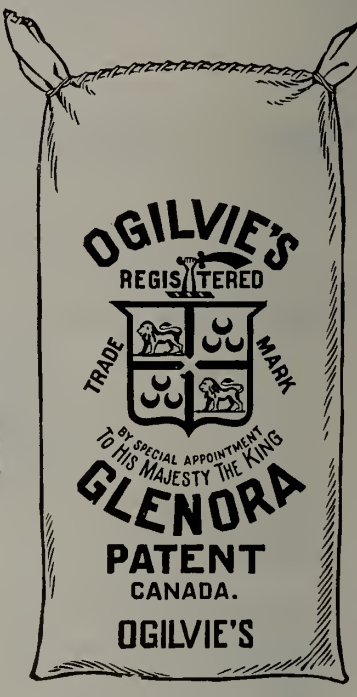

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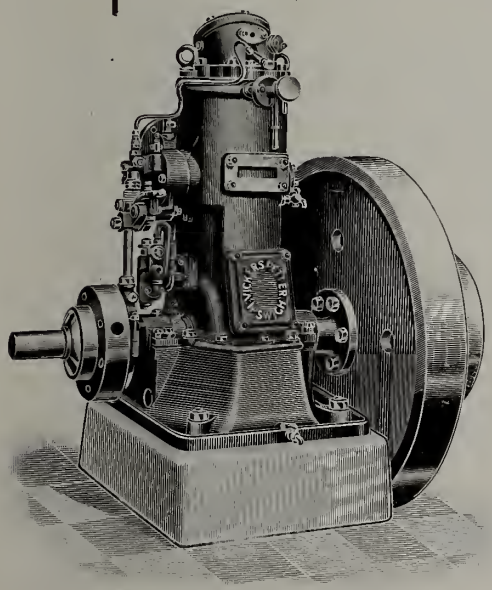

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CANADA'S ONLY MILLING AND GRAIN PAPER

CORRECTING AN ANOMALY

In order to obviate in the future the practice of completing a volume of twenty-four numbers of "Canadian Milling & Grain Journal" with an issue dated January 15, this issue of the journal completes volume III. Our issue of January 1, 1923, will constitute the first number of Volume IV., which will be concluded with the issue of December 15, 1923. The new arrangement, we feel sure, will be appreciated by our advertisers and subscribers.

A Happy Christmas to All

IN spite of the many trials and tribulations which each successive year brings to all of us, most of us have reason to be grateful for something or other on Christmas Day.

The reverses of the preceding twelve months which at their coming seemed like mountains, but which after they had passed, or been overcome, appeared to have shrunk to the size of molehills, are lost at Christmas time in a surge of optimism which warms the heart and puts new verve and life into our systems, and results in a reaction which carries us into the fight with renewed courage.

To those who are still in the ring the Christmas spirit should promote a mood which will not stand for failure, a mood which will possess the determination to not leave important things half finished or undone.

Those who during the closing days of 1922 feel within themselves a spirit of sincere desire to serve and to please better, and in doing so to try and make the world a better place to live in, will assuredly have what the "Canadian Milling & Grain Journal" wishes them—

A Happy Christmas

An Everyday Parable

IN a Certain Flour Factory there was a Foreman Guy who was Losing some of His Beauty sleep at Night thinking about a Wonderful Idea he was working for Getting in Solid with the Big Boss, and eventually, perhaps, engineering a Boost on the Paylist.

This was It:

He never overlooked a Chance of Tipping-off the Big Boss to the fact that another Guy, also a foreman, was a Clock Watcher; that He Loved the Ponies and Carried all their Names on a Little Newspaper in his Pocket; that he jawed the Ol' Jimmy Pipe more often than was Proper during Business Hours and that instead of Calling Down an occasional Slacker he spent much of the Firm's time Calling Up swell Janes and making Dates with Them.

The Big Boss stood it patiently for some Time. Then One Day when a Speil a Train of Cars long had been poured into what he called his Ear, he Sighed wearily and said:

"It is Bad as You say for a Man to be wasting the firm's time, but it's a Heap worse for another to be wasting time Spying on Him. We can stand one Short Weight Artist but not Two . . . the cashier will fix You up."

MORAL: Remember the Boss Sometimes Has His Eyes Open Too.

Concerning the Consumer

BRIEFLY stated, that ultimate distribution of goods, no matter what their kind, consists in furnishing the consumer the type of goods he wants, when he wants it and in the way he wants it. It is an axiom in all successful business undertakings that service counts for more than price. Convenience, credit, reputation of the goods all play a part in such transactions, and every element of service costs money; selling goods on credit, for instance. Abolishing the middleman is of course an idle dream; but curtailing cost by waiving service is fairly easy in most cases. Yet most people after saving part of every dollar, drift back into the old way because they want the service, with its convenience and credit. And they still have the privilege of railing at the middleman whose services they are willing to pay for, nevertheless.

A Duty of Citizenship

THE high annual fire losses incurred in the Dominion and which have been emphasized in a tragic manner by the recent holocaust in Terrebonne county should bring home to Canadian citizens everywhere, the fact that the prevention of fire is a national obligation incumbent on all.

Canadian citizens are the happy possessors of a proud heritage. All have the right to say, "My country", "my province", "my home." All share equally in the country's prosperity when business is booming, and all participate willingly, or otherwise, in its hardships when times are bad.

Enlarging Our Flour Export Trade

AN examination of the last census returns indicate a fairly even balance between urban and rural residents, the rural population of the Dominion being given as 3,924,328 and the urban at 3,280,444. This is a trait peculiar to Canada among the Dominions constituting the British Empire and is a striking indication of the general manner in which Canadian natural resources are being exploited and developed in conjunction with the settlement and cultivation of agricultural lands.

While, of course, agriculture is and will continue to expand as Canada's chief industry, the Dominion is also developing as a great manufacturing country, not alone for domestic needs but with an eye to an expansive export trade. This is particularly true of the milling industry which with the passing of the years should, in view of the sound business basis upon which it now rests continue to maintain its position as one of the country's leading manufacturing activities.

Taking the year as a whole, 1922 has been an excellent one for the milling industry. The evil effects of control have been overcome and their place has been taken by a condition of healthy development which will doubtless be accentuated during the coming twelve months.

One Way to Lose Profits

THERE are a hundred or more places in a flour mill where the steady loss of good stock by unrepaired leaks results in a serious reduction of profits.

A frequent, and by this is meant a daily examination of the mill machinery and equipment is indispensable. Such an examination should be commenced at the receiving separator to ascertain if good wheat is going to trash and waste. After this, the milling separator to find if there is any leakage of good wheat there.

There are times when the cases in the scourers leak wheat into the screenings. Wheat is too dear at any price to be sold for screenings even if they do bring a good price.

A close examination of the mill machinery all along the line may disclose numerous leaks. Clean middlings are leaking out here and there, flour is drifting out at different places and where there happens to be a choke-up good stock is spilled on the floors and walked on and finally swept up and dropped into the feed as being the best place in which to dispose of it.

Little leaks which are continuous and numerous amount to much even in a day. Multiply the losses by 300 and see what it amounts to in a year. Besides being a loss of good stock, leaking mills and there are doubtless many of them in the country, are a bad advertisement for the miller who does not effect a remedy and they are a business getter for his competitors.

Other Points of View

WHY THE RUMPUS?

Philadelphia Public Ledger.—From the amount of fuss made over the word "obey" in the marriage ceremony, one might be mistakenly led to suppose that it means something.

THE U. S. AND CANADIAN CROPS

Modern Miller—Canada does not produce wheat with the same certainty that the United States does. There is always the possibility of great variation with large and small surplus. A crop around 400,000,000 will always make Canada a formidable rival for the United States in the world's markets. Another factor is the volume of frosted wheat which comes at intervals. But with improved conditions of agriculture in the Canadian fields the United States will have to adjust itself to an average large surplus across the border.

DEMOCRATIC GOVERNMENT

The Australian (Melbourne).—Legislation which involves a heavy loading of the revenue in future years should be passed only after its provisions have been well digested. The ministry is content to rely upon its own experts, and is impatient of criticism. The opposition is naturally desirous of reaching the recess, and in any case, incapable of intelligent criticism. The cabinet allows departmental officers to usurp its functions, and a demoralized parliament, engrossed with inter-party quarrels, nods acquiescence when the minister tells it what the head of a department has told him.

NO LONE FURROW POLICY

Cape Argus (South Africa).—There is apparently a section which judging from the opinions ventilated by them, believe that South Africa can remain in a kind of backwater, where they can exist as a privileged class, immune from the great currents of world development. That idea is foolish as well as narrow, and the sooner it is got rid of the better. Such reactionary notions are not out of date, and if they could be put into force would only ruin the country, whereas the recognition of realities and the determination to co-operate in the development of our vast resources will put all classes on the road to prosperity.

FARMERS' BANK PROJECT

Medicine Hat News.—The question of Alberta's Farmer Government establishing a banking system to handle all farmer credits on a cost basis, in the province, has been revived at the Olds convention and the Government is asked to take action. Although the argument that this could and would be done was used as a lever to elect the present Government to power, yet the powers that be have wisely refrained from introducing legislation bearing on the point. The responsibility of office is a fine medium to bring men down out of the clouds.

Eastern Provinces

MONTREAL

Dubrule Building
Phillips Square Tel. Plateau 1983

MONTREAL DECEMBER 15TH. 1922

THE MONTREAL MARKETS

Flour.—Following a short period of dull business a firmer feeling, in sympathy with the recent strength of the future markets for wheat, has prevailed in the local flour market during the past few days. There have been no changes in prices from those last reported limited sales of cars of first patents being made at $7.10, second patents at $6.60, and strong bakers at $6.40 per barrel, in jute bags, ex-track, less the usual cash discount of 10 cents per barrel for spot cash.

The demand for supplies of winter wheat flour continues steady. Sales of car lots of choice grades are being quoted at $5.65 and $5.75 per barrel, in second-hand jute bags ex-track, and broken lots at $5 and $6 per barrel, ex-store, with winter wheat patents at $6.50 per barrel, in new cotton bags, ex-store. White corn flour is quoted at $5 to $5.10 per barrel, in jute bags, delivered to the trade. These prices show no change from those quoted two weeks ago.

Millfeed and Rolled Oats.—A fair amount of business is being done in millfeed for local and country account, but the trade with the United States has been checked owing to the fact that most of the railroads have put embargoes on shipments from Canada. The tone of the market is firm, with sales of car lots of Manitoba bran being made at $24, shorts at $26, and middlings at $31 per ton, including bags, ex-track. The market for rolled oats is also firm, with fair trade passing in standard grades at $3.30 to $3.40 per bag of 90 lbs., delivered to the trade.

Baled Hay.—The demand for baled hay shows no improvement, and the market in consequence is quiet, with no change in prices to note, car lots of good No. 2 timothy being quoted at $16 to $17, No. 3 timothy at $14 to $15, and clover and clover mixed hay at $12 to $13 per ton, ex-track.

Grain.—Recent cable advices received from the United Kingdom have been generally of a discouraging nature as they reported the consumptive demand for wheat slow, and that buyers were not disposed to respond to the advance in prices recorded here of late, consequently business was dull, as the few firms bids that were received were shillings below working basis. There was some demand lately from New York exporters for Manitoba spring wheat, and sales of a couple of lots of 50,000 bushels each No. 1 Northern were made recently at 26c per bushel over the Winnipeg December option, f.o.b., West St. John or Portland, for February shipment, and this figure was bid for further round lots and refused.

An import tax of 39 cents a bushel will be placed on wheat coming into Italy.

SAYS ATTEMPT TO FORM WHEAT BOARD HAD BAD EFFECT ON ELEVATOR BUSINESS

According to Will Hill who is well-known to the milling and elevator trades, and who is now western representative of the Huntley Manufacturing Company, Ltd., of Tillsonburg, Ont., the effort made during the early part of this year to impose a wheat control on the country seriously affected the grain cleaning equipment business. Many elevators, Mr. Hill declares, because of the fear that control would come absolutely refused to consider making any needed improvements in their plants with the result that much work which would have involved the expenditure of considerable money was postponed.

Mr. Hill whose headquarters are now at 217 Grain Exchange Building, Winnipeg, is about to

Will Hill

leave for an extended trip through his territory which extends from Winnipeg to the coast. He will visit Swift Current, Maple Creek, Medicine Hat, and Calgary, and will spend his Christmas holidays at Banff, with his wife and daughter. From Banff he will go to Vancouver where he is well and favorably known having been engaged in business for himself in that delightful city before becoming associated with the Huntley Manufacturing Company, Ltd.

Mr. Hill is an experienced miller and an expert where mill and elevator equipment is concerned. He is the embodiment of youth, pep and energy, and it is his proud boast and one of which he may justly be proud that no matter in what line of endeavor he has found himself, he has always tried to "play square."

EXPORTS TO THE UNITED STATES

The Canadian National Millers' Association, Montreal, has received advices to the effect that some members of the Association are making deductions for bags and cost of packing in connection with shipments of their products to the United States.

For the information of all members of the Association a circular has been sent out drawing attention to sub-section "C" of Section No. 402, of the

United States Tariff Act of 1922, which reads as follows:

"The export value of imported merchandise shall be the market value or the price at the time of exportation of such merchandise to the United States, at which such or similar merchandise is freely offered for sale to all purchasers in the principal markets of the country from which exported, in the usual wholesale quantities and in the ordinary course of trade, for exportation to the United States, **plus, when not included in such price, the cost of all containers and coverings of whatever nature, and all other costs, charges, and expenses incident to placing the merchandise in condition, packed ready for shipment to the United States.**"

All millers are advised to study the new tariff of the United States very closely before committing themselves to contracts. The National Millers' Association has established direct communication with United States Customs authorities in New York and can obtain official rulings on very short notice.

APPRAISAL OF EXPORT SHIPMENTS

There appears to be some doubt in the milling trade as to what basis the United States Appraisers use when appraising shipments of Canadian mill products to the United States.

An interpretation of the United States Tariff Act of 1922 states that all merchandise is appraised at the value on the date of exportation, the date of exportation in the case of Canadian shipments being the date when the merchandise crosses the International Boundary line. The date of the contract or the date of the consular invoice has no effect in determining any value.

EXTENSION COURSES IN EXPORT TRADE

At the request of the Director, Commercial Intelligence Service, and in co-operation with the Commercial Intelligence Department of the Canadian Manufacturers' Association, the University of Toronto and McGill University, have very kindly agreed to arrange Extension Courses in Export Trade providing sufficient support be forthcoming. It is proposed that these courses shall commence at McGill University, Montreal, on January 29, and at Toronto on January 15, and shall continue over a period of two weeks.

MONTREAL WORLD'S CHIEF GRAIN HANDLING CENTRE IN SEASON OF 1922

According to records which have been completed by the Grain Clearance Board, 154,550,000 bushels of grain were handled at Montreal during the past season, as compared with 111,071,093 at New York, Montreal's strongest competitor, and 138,453,980 at Montreal during the season of 1921. All previously established records were broken in 1922, including those for the amount of grain exported, the number of vessels visiting the port and the quick dispatch accorded them. Ocean vessels arriving during the season now ended totalled 1,194 with a tonnage of 3,931,901 as compared with 964 vessels of 2,891,956 tons in 1921, and in addition there were 1,374 ships bringing grain from lake ports.

Between the opening of navigation last spring and the evening of December 4, actual shipments of grain amounted to 153,905,644 bushels, 119,690,165 bushels of which were shipped from harbor elevators Nos. 1 and 2 and 34,215,479 bushels from the Grand Trunk elevator at Windmill Point. W. J. Whelan, manager of the Grain Clearance Board, states that during the season over sixteen million bushels of grain were transferred between the harbor and Grand Trunk elevators, in order to eliminate the necessity for shifting ocean steamers from berth to berth. Of the total of 1,374 grain vessels from the lakes, 1,135 were unloaded at the harbor commissioners' elevators and 239 at the Grand Trunk elevator.

QUOTATIONS ON BRAN AND SHORTS

The following nominal quotations on bran and shorts have been reported by the Canadian National Millers' Association, Coristine Building, Montreal, to the United States Customs Authorities as the prices of these commodities now in effect. These prices are the net cash prices in bulk, f.o.b., the mill:

	Bran.	Shorts.
Montreal	$22.00	$24.00
Toronto	22.00	24.00
Port Colborne	17.50	19.50
Fort William	15.50	17.50
Keewatin	16.50	18.50
Winnipeg	15.00	16.00
Moose Jaw	12.00	14.00
Calgary	11.00	13.00

THE CHICAGO MARKETS

The following table compiled from figures furnished by Messrs. Logan & Bryan, members of the Winnipeg Grain Exchange and the Chicago Board of Trade, C P.R. Telegraph Chambers, Montreal, shows highest price levels recorded on Chicago Board of Trade from Nov. 27, 1922, to Dec. 11, 1922, inclusive.

	Nov. 27	Nov. 28	Nov. 29	Nov. 30	Dec. 1	Dec. 2	Dec. 4	Dec. 5	Dec. 6	Dec. 7	Dec. 8	Dec. 9	Dec. 11
December Wheat	1.03 3/8	1.04 3/8	1.05 3/4	1.06	1.06 1/2	1.05 1/4	1.04 1/8	1.03 3/4	1.03 3/8	1.04 1/4	1.04 1/2	1.06 3/4	1.07 3/8
May Wheat	1.07 1/4	1.07 7/8	1.08 5/8	1.08 5/8	1.09 1/8	1.08 1/2	1.07 1/2	1.07 5/8	1.07 3/8	1.07 7/8	1.08	1.10	1.10 3/8
July Wheat	1.05 3/4	1.06	1.06 7/8	1.06 3/4	1.07 3/8	1.06 7/8	1.05 7/8	1.06 1/4	1.06 1/8	1.06 5/8	1.06 3/4	1.08 3/4	1.09 1/8
December Flax	1.89 3/4	1.92 1/2	1.93 3/4	1.94 3/4	1.96 7/8	1.95	1.96 3/4	1.96 1/4	1.96 1/4	1.97	1.98 3/4	2.02 5/8	2.04 1/2
May Flax	1.90 1/2	1.93 1/2	1.94 3/4	1.95 1/2	1.98	1.98 3/4	1.98 1/4	1.98	1.98 1/2	1.99 1/4	2.00	2.05 3/4	2.08 3/4
December Rye	0.78 1/4	0.78 3/4	0.80 1/2	0.80	0.80 1/4	0.79	0.78 1/2	0.79 5/8	0.80 1/4	0.80 1/2	0.80 1/2	0.82 1/4	2.08 3/4
May Rye	0.80 1/2	0.81 3/4	0.83 1/2	0.82 1/8	0.82 5/8	0.81 1/2	0.81 1/8	0.82 5/8	0.83 3/8	0.83 1/2	0.83 3/4	0.85 5/8	0.82
December Barley	0.52 7/8	0.53 5/8	0.54 5/8	0.54 5/8	0.54 5/8	0.54 5/8	0.53 7/8	0.54 3/8	0.54 3/8	0.54 3/8	0.54 3/8	0.55 5/8	0.55 1/2
May Barley	0.56 3/4	0.56 7/8	0.58 1/8	0.57 5/8	0.58 1/4	0.57 5/8	0.57 1/8	0.57 1/2	0.57 5/8	0.57 3/4	0.57 3/4	0.58 3/4	0.58 3/4
December Oats	0.43	0.43 7/8	0.44 3/8	0.43 7/8	0.43 3/4	0.43 1/8	0.42 3/8	0.42 7/8	0.43 1/8	0.43	0.42 7/8	0.44 1/8	0.44 1/4
May Oats	0.45 7/8	0.46 3/4	0.47 1/8	0.46 1/2	0.46 7/8	0.46 1/8	0.45 3/4	0.46 1/8	0.46 1/2	0.46 1/2	0.46 1/4	0.47 1/2	0.47 3/4
July Oats	0.45	0.45 5/8	0.46	0.45 1/2	0.45 3/4	0.45	0.45	0.45 3/8	0.45 5/8	0.45 1/2	0.45 3/8	0.46 1/2	0.46 7/8

Ontario

TORONTO

TORONTO DECEMBER 15TH. 1922

THE TORONTO MARKETS

Flour.—The local market for flour is weakening and buyers for the most part are holding off. The export business, particularly, is very much curtailed on account of British millers being in a position to undersell the Canadian miller, and there are evidences that they are making a dead set on trying to get back the trade they lost during the war. Manitoba for export is quoted at 39 shillings and 6 pence ($9.00), and Ontario winters at 29 shillings ($6.81), but bids are from one (0.23) to two shillings (0.46) out of line. Little business is passing in the domestic market, bakers having contracted for their supplies two months ago, and what trading there is now is largely in odd car lots. There are no changes in prices, patents being still quoted at $7.10 and 2nd patents at $6.60. Up till recently there was considerable demand for Canadian flour for export, and, while the United Kingdom was the best buyer, many other countries were taking satisfactory quantities of spring wheat flour. Some large blocks had been disposed of, principally to Mediterranean buyers. Newfoundland and the West have been good purchasers of Canadian flour, but all this trade has now fallen off and business generally is quiet.

Cereals.—There has been a considerably better demand for cereals during the past two weeks. Trade, however, is light, although there are many enquiries. The Canadian quotations are about two shillings (0.45) above the buyers' ideas. The official domestic quotation for rolled oats is $3.25 per bag of 90 pounds, with oatmeal ten per cent. above that price on account of the difference in weight.

Millfeeds.—Millfeeds remain firm with a good demand, both for export and domestically. Dealers report so satisfactory a volume of business in the domestic market that it is not necessary to push the export trade. One firm reports that they are sold ahead to the beginning of the new year and it was doubtful if they would be caught up by then. The United States market, it is reported, is about on a par with the Canadian market. Local quotations are as follows: bran, $24.00; shorts, $26.00; white middlings, $32.00 and feed flour $1.90, Montreal freights.

Oil cake.—Oil cake is quoted at $53.00, car lots, at the mills. Till now there had been very little movement in the product, but it is commencing to liven up considerably and from now on a fair amount of business should be done. The export demand, also is picking up. Linseed oil is strong and is holding firms. The price is 96 cents, in car lots, at the mills.

Grains.—A decline of three-quarters of a cent in the price of No. 1 Northern wheat on the Bay port basis was recorded in Toronto recently, and a further decline was noted in American corn, which dropped off a point, No. 2 yellow going at 87½ cents and No. 3 at 86 cents. Ontario rye is quoted at from 77 to 79 cents. Local grain dealers report a slow trade in wheat, although a fair demand exists for Ontario oats. For the most part Ontario grains are scarce. A good export market exists for rye, barley and buckwheat if these grains could be secured in quantity. As the month progresses the Toronto grain market continues quiet with the millers maintaining their former attitude of caution. Many of the larger mills are well booked up in advance and hence present purchases are small. Ontario grains are moving a little better, farmers being more inclined to deliver now when the weather is unfavorable for work on the land. Quotations at the close of the first half of December were as follows: Manitoba wheat, No. 1 Northern, $1.21, c.i.f. Bay ports; American corn, No. 2 yellow, 88½c, track, Toronto, prompt delivery; No. 3 yellow, 87½c; Ontario oats, No. 2 white, 41c to 43c; according to freight outside; Ontario wheat, winter, per car lot, $1.08 to $1.10; No. 3, $1.05 to $1.07, f.o.b. shipping points, according to freights; Ontario barley, malting, 60c to 62c; Ontario rye, No. 2, 76c to 78c; Ontario buckwheat, No. 2, according to freights, 73c to 75c.

RECORDS BROKEN AT LAKES HEAD

Fort William. — Figures compiled lately by the Lake Shippers' Clearance Association shows conclusively that the present has been an epoch marking season in the grain handling age of Canada.

During November 83,093,000 bushels were shipped from lakehead elevators.

November, 1922, is the big month in the history of the lakehead ports.

During the season beginning September 1 and ending November 30, outgoing shipments totalled 185,093,000 bushels. The same period of 1915 totalled 119,000,000.

The grand total for the entire season of 1915 beginning September 1 was 174,519,000 bushels and that was the record up to this year. That record has been exceeded by ten and a half millions.

The season just closing is the biggest one on all points than any year yet recorded.

The apex to all of this was attained at the very end of November in the face of difficulties which may have well dismayed any organization or association of organizations. There was first the storm. Then hydro power failed in several Port Arthur elevators for several hours. Every skipper and every shipper will be remembered by everyone who participated in the efforts which finally crowned it with complete success.

MACHINERY SALESMAN WANTED by old established manufacturer to sell flour milling, bakers' and other equipment. Must have sound mechanical or engineering training, be able to sell and not afraid of work. Applications treated in confidence. Good position for right man. Reply Box 133, "Canadian Milling & Grain Journal," Dubrule Building, Montreal, P.Q.

CANADIAN LAKES HEAD PORTS AND THEIR FACILITIES FOR CROP HANDLING

Fort William.—The Canadian lakehead ports are on top of the world in ability to handle grain. Given ideal conditions which would include a constant stream of cars at all elevators and all the lake tonnage needed, elevators could handle a crop several times as large as has ever been produced with comparative ease.

And this ability is being steadily increased. There has been no boom in elevator construction, if it is admitted that after all booms there is a reaction. There has been no reaction in elevator properties. The demand has been, and is constant. A year like the present one makes the investment more attractive than ordinary, but last year, a dull one, in comparison, saw the terminal elevator capacity increase 3,800,000 bushels. Officially, the capacity last year was 53,043,000 bushels. This year the official figures are 56,730,000, the increase being credited to the addition to the Northwestern, the Richardson and the new Superior. The increase of next year over this year will be as great, and probably greater. The port is almost certain to pass the 60,000,000 bushels storage capacity mark.

Three Times the Storage

Under ordinary operation most of the elevators can empty and fill their bins once a week. Operated to ultimate capacity, under ideal conditions, they could handle in and out probably three times their storage capacity, every week. There would, however, have to be more grain than there is, if they are to work to such capacity, even during the fall rush.

The average boat loading leg of the elevators will handle 12,500 bushels an hour. There is usually a leg to about every 500,000 bushels of storage capacity. With every boat loading-leg in the port working to capacity, grain at the rate of a million bushels an hour could be poured into the holds of a full complement of ships. The record of this port for a day is a trifle under 6,000,000, made in 1915. The record for the present season is two millions under that, but the average for the season has been great enough to congest the eastern ports.

Additional Elevator Space

The port is assured of practically a 4,000,000 increase in elevator capacity before next year's crop begins to move. The Stewart interest contemplate a new 2,000,000 bushels plant, the Parrish and Heinbecker Company, an ultimate capacity of 1,250,000 bushels, most of which will be new, and the Western Terminal may have an addition with a capacity of 750,000 bushels, according to recent announcements.

TRADE OPPORTUNITY

No. 287.—Messrs. Grippeling & Verkley, Damrak No. 74, Amsterdam, Holland, are exceedingly anxious to get in touch with some prominent export millers in Canada. The firm has first-class connections in the United States, representing the Washburn-Crosby Company, for Holland and Belgium. They are open to handle a high-class Canadian account in flour and rolled oats. The firm is also interested in grain, especially barley and oats. Excellent references can be furnished.

The Modern Sophocles

THE physiologist has told us that very few men can ever entertain a new idea after they are fifty years of age, but physiologists are not infallible any more than other men are, and it should be the accepted duty of every man who is rubbing along toward the half century mark to show them how utterly astray they are in this matter. It is true that they can find many cases to illustrate their theory, and we really believe that that is one of the uncomfortable things the matter with this old world of ours—there are too many of them. Of course we must admit that all new ideas are not valuable, but exactly the same may be said of old ones; it is just as serious a matter to insist on the exclusive virtue of the old as it is to take the opposite view. Somehow, we believe that if older folk had a warmer welcome for new ideas, it would be much easier to convince young people the virtue of old ones.

DROP TRADE NAME "CREAM OF THE WEST"

The use of the well known trade name, "Cream of the West," is being discontinued by the Maple Leaf Milling Co., Ltd. The company's brand of flour that formerly bore that name in Western Canada is known in other parts of the Dominion as "Maple Leaf" flour, and the company has decided to have its flour known from coast to coast by the name "Maple Leaf."

The change is in name only, the "Maple Leaf" flour being identical with "Cream of the West." The company's western buyers are requested to familiarize themselves with the name "Maple Leaf" and to ask for the flour by that name.

BULK HANDLING OF WHEAT

An agreement between the Commonwealth Government, the Farmers' Bulk Grain Co-operative Company, and the Government of South Australia to provide for the bulk handling of wheat in that state has been approved by the Commonwealth Parliament. The agreement provides for an advance to the company of £1,000,000, (approximately $4.500.-000), or two-thirds of the cost of the elevators, the first re-payment by the company being due three years from the date of the first advance.

OBITUARY

Following ill-health of some months Mr. William Mackenzie Stark, 538 Sherbourne street, Toronto, died recently at his residence. Mr. Stark was for 40 years widely known in Toronto as a grain dealer. He was born 78 years ago in Toronto and was educated in Edinburgh, Scotland. After returning to Canada he first went into business in Montreal, later removing to Toronto. He retired from business two months ago.

Western Provinces

WINNIPEG

WINNIPEG DECEMBER 15TH. 1922

THE WINNIPEG MARKETS

Flour.—Western millers continue to report an excellent demand for their product from both domestic and seaboard account, and orders are being received that will keep mills running to capacity for several weeks to come. The demand from both sources has continued in greater volume than was anticipated, and indicates there were a good many holes to fill, resulting undoubtedly from the hand to mouth variety of buying that was in evidence for months previous to last November. The trade are looking for some let-up in the demand from domestic sources as the bakers appear to be well supplied, and at the same time it is believed that the farming community throughout the prairie provinces, or the majority of it, have laid in sufficient to last them through the winter months. However, the export market is expected to continue active and buying remains on a fairly broad basis. Since the beginning of the new crop year (September 1), the western miller has been very busy with all mills running to capacity to fill orders, and if this activity should continue throughout the balance of the year, Canadian millers will undoubtedly enjoy one of the best seasons in their history.

Since last report wheat prices have shown no radical change, and flour prices remain unaltered present quotations being: For delivery at points between Fort William and the Saskatchewan boundary top patent springs are quoted at $6.70 bbl., jute, seconds at $6.10, and first clears at $5.40, mixed cars, 30-day terms; cotton, 10c over this basis. Saskatchewan and Alberta points are 10c under Manitoba, and Pacific Coast points 30 to 50 cents over. Bakers and other carlot buyers get special prices.

Millfeed.—While demand for bran and shorts is not so keen as recently, still a good trade is passing at unchanged prices. Quotations: bran $18 ton, in mixed cars with flour, and shorts $20, in bags, delivered, Winnipeg territory.

Oatmeal.—Business now showing improvement and demand sufficient to keep local mills busy. Prices hold steady and the advance made during the end of November is still in force, present quotations being as follows: Good brands of rolled oats, $2.85 in 80-lb. cotton bags; oatmeal $3.55 in 98-lb. cotton bags, delivered, Winnipeg territory.

Linseed Products.—The demand for these commodities is very quiet at present, and outside of a little export trade in meal and cake there is nothing doing, and little change for the better is anticipated until after the holiday season. Prices have taken a drop of about $3 per ton since last report, and present quotations from mill to dealers are: Meal $49, and cake $47 per ton, f.o.b. Winnipeg. Oil is also showing a reduction of 5 cents per gallon, and is now quoted: raw $1.15, and boiled $1.18.

THE GRAIN MARKETS

Since the close of the November contract, the market has assumed a winter attitude, and has been more or less dull, with pit offerings light and selling pressure practically nil. Prices have worked gradually lower, the December future declining 2 cents during the first four trading days of the month. At the present time the foreign demand appears to be somewhat slow, but there is a good buying power underneath, which is responsible for the market acting stubborn in the face of an apathetic demand.

For practically three weeks the United Kingdom and the continent appear to have been buying on a very moderate scale, and those closely advised express the view that before long an enlarged export business in Western Canadian wheats can be located for, and it is largely on this basis that shipping activities continue.

The advance in lake freight rates has hampered business to a certain extent, but the close of navigation has been postponed until December 15, or even a little later, and with shipments continuing right up to this date, it is believed that stocks at the terminals will dwindle down to small figures.

Further reports of unfavorable weather in the Argentine have been received and should weather conditions in the southern hemisphere continue unfavorable, the new crop wheat in that country will be seriously impaired as to quality, and as Europe will not be interested in poor quality wheat, it should have a strengthening effect on the markets on this side.

The coarse grains have been generally dull and featureless, but appeared to be steady and firm. Stocks of these commodities at the head of the lakes are not large, and although offerings have been light, the demand has not been urgent enough to cause any great disturbance in values. The cash market has been an odd carlot proposition with small amounts changing hands at current spreads.

American crushers have been buyers of the available odd cars of flax but their requirements appear to have been satisfied, and should any new demand arise the trade are of the opinion that it will be from Canadian crushers for odd car amounts. There is, however, a good demand for shipping quantities of this cereal, and if larger amounts could be accumulated, the trade believe they could be sold at a higher premium.

PLANS READY FOR ELEVATOR EXTENSION

Mr. W. L. Parrish, of Winnipeg, a member of the firm of Parrish and Heimbecker, has announced that his company has plans prepared now for an extension to the plant, whereby a storage capacity of one million bushels would be added to the recently opened first unit of their new elevator, on the Port Arthur waterfront. The work will mean the erection of thirty-six tanks, which will be built at a cost of $300,000. "We may do this work at once," said Mr. Parrish, "and the piles will have to be sunk in the ice later on in the season. We hope to have the new elevator ready for next year's crop, but, if the elevator extension is put on at once, we shall be ready to handle part of this year's crop next spring."

CANADIAN COUNCIL OF AGRICULTURE FAVORS NEW DEMAND FOR WHEAT BOARD

Winnipeg.—The organized farmers of the West are still determined to have a Wheat Board through which their crops can be marketed. Following the lead of the Saskatchewan Co-operative Elevator Co., and the United Grain Growers, the two big grain growers' companies, other small local organizations have decided to ask, through the Canadian Council of Agriculture, the Dominion and Provincial Government concerned to pass legislation that will secure the working of a Wheat Board in 1923.

The Canadian Council of Agriculture met in Winnipeg recently and after a debate, which appears to have extended over a good part of two days, passed a perfunctory resolution to the effect that, "Whereas, there is every evidence that the farmers of the western provinces are anxious that the Wheat Board be established, therefore, the Canadian Council of Agriculture expresses the hope that the provincial and federal authorities by co-operation will establish a workable board and the Council also expresses its willingness to assist in making the operations of the board a success."

The central organization of the farmers is thus consigning the question of the Wheat Board to the politicians with the pious hope that they may do something with it to quiet the farmers who are still agitating for it. There is no leadership or helpfulness in the position taken by the Canadian Council of Agriculture. The situation was different last year and the year before that. The farmers' leaders were then actively preparing and presenting arguments for a Wheat Board, and were claiming that they could show in dollars and cents what a Wheat Board would have saved for the farmers in those years.

VANCOUVER AND THE GRAIN TRADE

Vancouver.—At a mass meeting held recently, a resolution inviting the attention of the federal government to the need of additional elevator space for grain handling was adopted. The resolution calls attention to the fact that, despite discriminatory freight rates, the volume of grain directed to this port has been far in excess of the handling facilities resulting in the application of an embargo against movements of grain from prairie points to Vancouver and cancellations and transfer of many orders to United States ports.

NEXT YEAR MAY WITNESS GRAIN STORAGE CAPACITY AT LAKES HEAD INCREASED BY 10,000,000 BUSHELS

Fort William.—According to a report in circulation here recently Mr. W. D. Staples, former member of the board of grain commissioners for Canada, may be among the builders of new elevators here during the next 12 months. It is understood that Mr. Staples owns a site in the neighborhood of the government terminal plant, which could be made suitable with a little dredging. Mr. Staples owns and operates one of Canada's finest and largest western farms at Elm Creek, Man. He has long been a keen observer of the grain trade and during his term as a member of the board he became versed in all its ramifications.

Should Mr. Staples decide to build here his house would supply storage space additional to the prospective increase previously announced, amounting to about 4,000,000 bushels. There are said to be other prospects under consideration and if a fair percentage of them actually develop there will be at least a 10,000,000 bushel increase in the total storage capacity here during the next 12 months.

MAY ORGANIZE GRAIN SHIPPERS CLEARANCE EXCHANGE AT VANCOUVER

Vancouver.—Formation of a Vancouver grain shippers' clearance exchange to function after the manner of a grain "pool" is a possible development of recent conferences here between members of the board of grain commissioners for Canada and Vancouver grain interests.

The "pool" referred to in the above despatch is probably meant to indicate an arrangement after the fashion of the lake shippers' clearance association of Fort William. By this means grain in the elevators here is controlled by the lake shippers through a clearing house, and vessels and railways are able to get complete loads from one or two elevators without the necessity to pick up individual lots of grain as was formerly the practise. The clearance association here, created by the late F. W. Young, of Fort William, is regarded as one of the great achievements for the rapid handling of grain. J. A. Speers of Fort William, is now the manager.—Fort William Times Journal.

THE WESTERN MARKETS

The following report furnished by the Winnipeg Grain Exchange, shows daily highest price levels from Nov. 27, 1922, to Dec. 11, 1922, inclusive.

	Nov. 27	Nov. 28	Nov. 29	Nov. 30	Dec. 1	Dec 2	Dec. 4	Dec. 5	Dec. 6	Dec. 7	Dec. 8	Dec 9	Dec. 11
December Wheat	1.16¼	1.18¼	1.19¼	.....	1.20½	1.20	1.18⅝	1.19	1.18⅜	1.19⅛	1.19¾	1.22½	1.22¾
May Wheat	1.15¼	1.16⅜	1.17⅜	.....	1.18	1.17½	1.16⅜	1.16½	1.16⅜	1.17⅛	1.17⅜	1.20½	1.21
July Wheat	1.07⅛	1.07⅞	1.08⅝	.....	1.09⅛	1.08⅞	1.07⅜	1.07⅞	1.08	1.08½	1.08½	1.09⅝	1.10⅞
December Corn	0.69⅞	0.71¼	0.72	.....	0.72½	0.72	0.70⅝	0.70⅛	0.69¾	0.71	0.70¾	0.72⅜	0.73½
May Corn	0.69⅝	0.70⅜	0.71	.....	0.71½	0.70⅞	0.69⅜	0.70	0.69⅝	0.70¼	0.70¼	0.71½	0.71⅞
July Corn	0.68⅞	0.69⅝	0.70¼	.....	0.70½	0.70	0.69½	0.69½	0.69½	0.70	0.69⅝	0.70⅞	0.71¼
December Oats	0.42⅝	0.43⅜	0.44	.....	0.44⅝	0.44	0.42⅞	0.42¾	0.42⅞	0.43⅛	0.44⅛	0.45⅞	0 46¼
May Oats	0.42¼	0.42⅞	0.43⅜	.....	0.44	0.43⅜	0.42¾	0.42¾	0.42⅞	0.43	0.43¼	0.44⅞	0.45
July Oats	0.39½	0.39⅝	0.40⅛	.....	0.40⅜	0.39⅞	0.39¾	0.39¾	0.40	0.40⅛	0.40¼	0.41⅛	0.41⅜
December Barley	0.69	0.68	0.68	.....	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
December Rye	0.83¾	0.84¾	0.85½	.....	0.84¼	0.83¼	0.82	0.83½	0.84⅛	0.84½	0.84⅞	0.87¼	0.87¾
May Rye	0.85¼	0.86¼	0.87¾	.....	0.88	0.87¼	0.86¼	0.87¼	0.87¾	0.88	0.88⅛	0.90½	0.90⅞

Foreign Flour and Grain News

ALL previous records for the movement of Western Canada's wheat crop from the farmers, across the lakes and to seaboard have been smashed this season. With an increased acreage and yield for the three prairie provinces the West raised a total volume of wheat which was larger than 1915, the previous banner year. The estimated figures recently given by the Dominion Bureau of Statistics placed the Western Canada wheat crop for 1922 at 366,437,000 bushels, the Free Press of Winnipeg, while the grain was still standing in the field, gave their estimate as 371,901,000 bushels and the North-west Grain Dealers' Association, after threshing had been completed, placed the amount of 385,043,000 bushels.

From the commencement of the movement of the new crop up to Dec. 5, the farmers had marketed at country points 242,077,654 bushels, and are now delivering at the rate of about one million per day. Of the amount marketed by farmers, 158,275,019 bushels had been shipped east from the head of the lakes, while about 7,000,000 bushels have left the country via Vancouver. This leaves a balance between the amount marketed by farmers and that exported from the three provinces, of 76,802,635 bushels, which must now be in terminals, enroute, in country elevators, or absorbed by Western mills.

If we take the total yield wheat for the West at the figures given by the North-west Grain Dealers' Association, viz., 385,043,000 bushels, and deduct, say 45,000,000 for seed, grist mill requirements, feed and waste, we have 340,043,000 bushels available for market on the total crop, while it would still leave in farmers' hands on Dec. 5, to be marketed about 97,965,346 bushels.

The movement of the crop in all directions has been far greater than ever anticipated by the trade.

There has been no slackening of activity in the milling business during the past two weeks and while this is the time of year at which a slow-up is looked for, orders being received will keep the large exporting mills at least busy at capacity for several weeks to come.

Not only is export business active, but the domestic demand continues strong, this being probably due to the extended period of hand to mouth buying which ended about the beginning of the present crop year, and which kept buyers' supplies at a low ebb.

Pending advices of a more definite nature the milling trade is not displaying any undue concern over the recent report from England that the Government was being asked to impose an embargo on shipments of Canadian flour to that country. Any action from an outside source which would be designed to interfere with the legitimate conduct of any branch of Canadian industrial activity would doubtless soon bring retaliatory measures. However, as they say in Ireland, " 'Tis a mistake to greet the Ould Boy till ye meet him."

GERMANY'S GRAIN REQUIREMENTS

Paris.—Germany must find some way of getting 800,000,000,000 marks' worth of grain to feed her people during the next year, the Reparations Commission learned in its recent investigation in Berlin.

As this amount is about double the present total of paper money in circulation in Germany, purchase of grain is deemed obviously impossible except through speedy financial rehabilitation of the country or food credits from abroad. It seems to be quite generally conceded that both the credits and the food would have to come from America.

URUGUAY—Recent unfavorable weather has greatly reduced the wheat crop, and, according to a report by the London and Brazilian Bank, the outturn will be only 50 per cent of normal. This is a small grower, an average crop being roundly 81,000,000 bushels, of which about 800,000 bushels are exported. The country will have sufficient for home consumption, as old crop reserves are liberal.

ARGENTINA—Fine weather is favoring the commencement of the wheat harvest in the North. There is every indication that bumper yields of all grain will be obtained this year. Estimates of the wheat outturn tend to rise even higher than 196,000,000 bushels already officially indicated. Particular mention is made of the excellent conditions obtaining in the southern zone, and it is highly probable that the oats outturn also will exceed the official estimate of 40,000,000 bushels. The indicated exportable surplus of new crop linseed is fully 1,500,000 tons. Maize is growing favorably.

ROUMANIA—It is again reported that sowings are small, owing to recent rains, and the acreage so far seeded to wheat does not equal 50 per cent. of the 1921 area. The situation is extremely critical.

JUGO-SLAVIA—The weather in this country has turned quite favorable of late, and it is to be presumed that growers have made good use of the changed circumstances. Sowing has been greatly delayed by the excessive rains, but there is now good reason to believe that all the winter crop will be got in.

RUSSIA—According to a Moscow report, the State Department for Grain estimates that 600,000 bushels of wheat and 720,000 bushels of barley will be available for export from this year's crops. Exports are to be made from the Black Sea ports of Novorossisk and Nicolaieff to Italy, England and Germany. Although the report does not actually say so, the Government, it is believed, have definitely sanctioned the export of the foregoing quantities.

AUSTRALIA—Unofficial estimates of this year's wheat crop, both in West and South Australia, are slightly higher than last year. The forecast for West Australia is 120,000,000 bushels, compared with 112,000,000 bushels in 1921, and for South Australia 196,000,000 bushels, as against 208,000,000 bushels. The estimates occasion little surprise, as reports from these areas have been consistently more or less favorable. In New South Wales and Victoria the wheat crop has greatly suffered from lack of moisture, and it would be no surprise were the combined outturn of these two States to fall short of last year's production by 20,000,000 bushels.

The Elevator Operator

VANCOUVER HARBOR BOARD TO CONTROL B.C. GRAIN TRAFFIC

Ottawa—Following recommendations made by Hon. Dr. J. H. King, whose views have been concurred in by both Hon. J. A. Robb, Minister of Trade and Commerce, and the Hon. Chas. Stewart, the government has decided to turn over to the Vancouver Harbor Board the problem of grain storage and elevator facilities at Vancouver. The plans will be worked out as soon as the minister, Hon. J. A. Robb, returns from the Orient.

The present elevator accommodation at Vancouver will be turned over to the Harbor Board, and it is expected that the Board will proceed with the erection of another grain elevator of large capacity. The Government is of the opinion that the westward movement of grain is destined to be large and permanent, and it is felt that even if water freight should increase to such an extent as to handicap the shipments of grain via Canadian Pacific coast ports, a counter-balancing reduction in rail freights westward will eventually have to be made.

The Government is also of the opinion that the grain movement is destined to be of such a nature that private enterprise will embark on the construction of elevator accommodation at Vancouver, and there is apparently substantial ground for this belief.

Acquire Elevator

The Vancouver Harbor Board will, following this decision, acquire the present elevator at Vancouver from the Government, and issue bonds for further construction after consultation with the Government departments concerned. It is understood that at their recent visit the Board of Grain Commissioners was convinced of the urgent necessity of providing increased accommodation at Vancouver at the earliest possible date. They went to Ottawa on their return from the coast and added their representations to those of Dr. King, with the result noted. Arrangements have also been effected whereby the elevator there will be kept from being plugged in the meantime. If a sale has been effected and shipment is desired of grain not yet in the elevator, an equal grade and quantity can be shipped from the elevator to fill the order.

GRAIN SHIPMENTS VIA VANCOUVER

From the commencement of the grain season up to November 27, 3,500,000 bushels of wheat have been shipped from Vancouver, according to Mr. L. S. Carr, manager of the Calgary branch of the Vancouver Milling and Grain Co., Ltd. For the month of November up to the date mentioned, 1,620,000 bushels had been exported, and coast brokers estimated that the total for the actual month would be from two to two and a quarter million bushels.

Quite recently there were 800 cars of grain standing on both the C. P. R. and Canadian National Railways, and although the permit system was being rigidly adhered to a very considerable volume of wheat was also in procses of shipment.

TO RUSH WORK DURING WINTER ON MONTREAL'S NEW GRAIN ELEVATOR

Actual construction on Montreal's new grain elevator, which is to have a capacity of about 10,000,000 bushels, and which is to cost upwards of $10,000,000, will probably begin within the next two weeks. Work is being held up temporarily, awaiting final approval of the government which will be obtained as soon as the Hon. Ernest Lapointe, Minister of Marine, returns to Canada. He is at present en route home from Geneva.

Plans for the erection of this elevator, which is said to be the largest in the world, have been the paramount interest of those connected with grain and shipping for the past six or seven months. The elevator, as previously stated in "Canadian Milling & Grain Journal," is to be erected in the eastern part of the harbor at Tarte pier. The first unit will have a capacity of at least 4,000,000 bushels, and will be ready for service by October, 1923.

Badly Needed at Seaport

The dire necessity of the new elevator can be realized from the fact that more than 156,000,000 bushels of grain have already been handled in the port of Montreal this season.

Under existing grain handling conditions all the berths in the central and western parts of the harbor are leased to liners, and cargo boats loading at these berths are forced to move when a liner arrives. During the summer one of these tramp steamers had to move fourteen times.

Construction work on the new elevator will be continued throughout the winter and in addition to other harbor improvement, employment for over one thousand men will be provided. After the completion of the first unit, other units will be added as the need for them arises and the final building will have a capacity of approximately ten million bushels. With the construction of the first unit, conveyor galleries will be provided to serve seven berths—four on Tarte pier, two on the upper bulkhead wharf. The Tarte pier conveyors will be built over the second storey. These will be added to the present one storey sheds at this part of the harbor.

90,000 Bushels Per Hour

When the elevator is completed, grain will be supplied to ocean steamers at the rate of ninety thousand bushels per hour. In order to save berths the steamers will be provided with two conveyor belts each.

A WHEAT HANDLING FEAT

Hauling 1,144 bushels of wheat 22 miles, in eight wagons, drawn by fifteen teams of horses and mules, driven by one man, and then unloaded into the elevator of the Alberta Pacific Grain Co., at Vulcan, in one hour and seventeen minutes, without unhooking a single animal, is the proud record established recently by Ralph Morehouse, in the employ of Mr. Glenn House, owner of the Bar O.N. ranch, in the Buffalo Hills district, between Vulcan and Gleichen.

The Elevator Operator

HUGE CROP WILL KEEP RAILWAYS BUSY DURING THE WINTER MONTHS

Fort William—One of the salient features of the remarkable movement of this year's grain crop has been the volume of all rail shipments during the season of navigation, and indications are that the capacity of all lines both east and west of Forth William will be taxed to capacity during most of the winter.

During the fall rush the policy has always been to hold as many cars on western lines as possible, and operate as many trains as possible. During this record breaking year the railways have been able to draw grain to the head of the lakes faster than the eastern and bay ports could discharge it over seaboard routes, and at the same time draw a larger quantity to the seaboard all rail than ever before.

Million in a Week

In one week over 1,000,000 bushels went east all rail. After the close of navigation it is probable that storage elevators will gradually fill and the movement east all rail will, as usual, become more pronounced.

Rolling stock now bulked on western lines will be spread over the systems and crews discontinued on western lines will be replaced by crews on eastern divisions in order that the traffic may move evenly over the entire systems.

CANADIAN OAT AND WHEAT ENTRIES TOP LIST AT INTERNATIONAL SHOW

Chicago.—Canada has again won the oats-growing championship at the International Grain and Hay Show. The entry of Mr. J. W. Biglands, of Lacombe, Alta., won the sweepstakes over a large field of American and Canadian growers competing for the $10,000 in cash prizes offered by the Chicago Board of Trade. Biglands' sample weighed 46½ pounds to the bushel.

The Board of Trade cup was awarded to Mr. R. O. Wyler, Luseland, Sask., for having grown the best wheat produced on the continent this year. He won with a sample of hard red spring. Montana had held the title, having been won last year by Mr. G. W. Kraft, of Bozeman, from Mr. J. C. Mitchell, of Dahinda, Sask.

Legal Notes

Toronto.—Mr. Justice Middleton has reserved judgment in an action brought by the Humphreys-Godwin Company, of Memphis, Tenn., against the United Farmers' Co-Operative Company for $3,933 damages, for alleged repudiation of contract respecting the purchase of 300 tons of cottonseed meal, from plaintiffs, at $50 per ton.

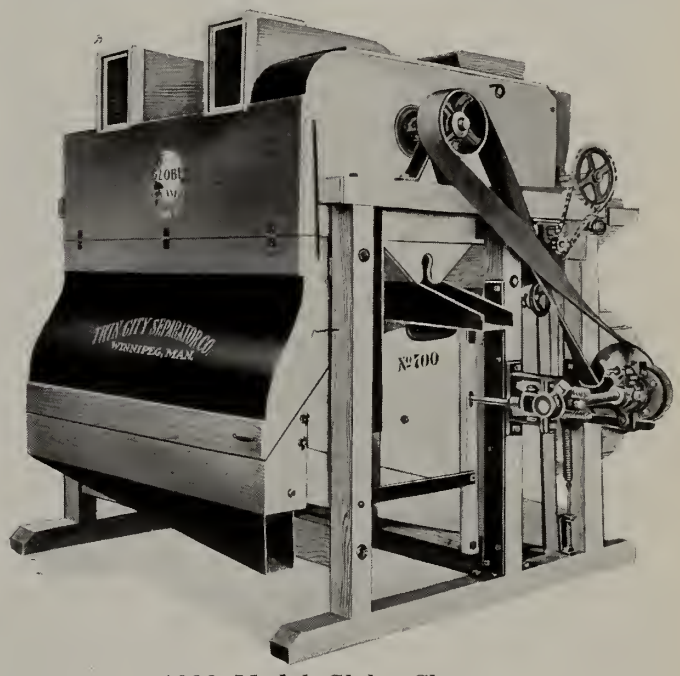
The Turtle Mountain Milling Co., of Boissevain, Man., has entered an appeal in the Manitoba courts against the seizure of 7,000 bushels of wheat by Mr. John E. Dayment, secured by an attachment for debt. The wheat is needed by the mill. The owners are Messrs. George Dow and E. W. Bolton, and the county court judge refused to set aside the writ of attachment.

THE 1922 MODEL GLOBE CLEANER EMBODIES MANY IMPROVEMENTS

It is claimed for the new 1922 Globe Cleaner, illustration of which is shown herewith, that because of the improvements made thereto during the past year it will clean the average run of wheat down to practically no dockage, and that it will perform this task without any waste.

Wheat containing barley and kingheads has always been considered an inseparable mixture. The new Globe Cleaner, however, makes a very close separation of this mixture. In fact, a closer separation than old cleaners used to make of wild oats from wheat.

One of the main improvements put into the new Globe Cleaner is an increase in its handling capacity by 200 bushels per hour. The 1922 Globe Cleaner is



1922 Model Globe Cleaner

dustless, has an adjustable speed clutch, and new type adjustable shake. It is fitted with S.K.F. ball bearings and a new Globe suction system. Another improvement is found in the splitting of the blast fan and staggering of the blades. It can be supplied for either belt or motor drive.

Equipment furnished with the machine includes a wheat and oats separating gang and sieves, and screens, for cleaning wheat, oats and barley. If flax sieves are desired same should be specified. The drive pulley might be added, is of 14-inch diameter, 5-inch face, and has 480 r.p.m.

The Globe Cleaner is manufactured by the Twin City Separator Company, Ltd., Winnipeg, Man.

The United States leads the world in wheat production this year with 810,123,000 bushels. Canada is second with 388,773,000 bushels, India is third with 366,351,000 bushels, and France fourth with 233,380,000 bushels.

Elevator, Mill & Personal Notes

Fort William.—The Bole Company, composed of well known Fort William people, who at present are operating largely from Winnipeg headquarters, have completed the purchase of a site from N. M. Paterson interests and will build an elevator in the west end of Fort William, the capacity of which has not been announced.

Exclusive of the Bole Elevator, prospective construction for next year will increase storage capacity here five million bushels with an additional million bushels for 1924.

The W. D. Staples Elevator is to have sufficient bin space for one million bushels, the Stewart Elevator 2,000,000 and the Parrish and Heimbecker annex 1,000,000 bushels.

Montreal.—The Eastern Milling Company, Ltd., has been incorporated, with capitalization of $15,000.

Port Arthur, Ont.—Plans are being prepared for the construction of a cleaning plant for the Saskatchewan Elevator Company, Ltd., at Current River.

Goderich, Ont.—The Goderich Elevator and Transit Company, Ltd., is understood to be contemplating the erection of a 1,000,000-bushel annex to its elevator here in the event of certain tax exemption proposals being authorized by the Goderich council.

Fort William, Ont.—The present 1,000,000-bushel capacity of the Western Terminal Elevator Company's house here will be doubled when new construction work, for which plans are now in hand, has been completed.

Toronto.—Word reached Toronto recently of the burning of the flour and grist mill of Messrs. T. R. Flood & Sons, at Harrow, 20 miles east of Windsor. It is stated that the damage exceeds $20,000. Spontaneous combustion is supposed to have caused the outbreak.

Toronto.—The Russell-Bell Flour Mills, Limited, have been organized, with head office at Newmarket, and an authorized capital of $60,000. The company is empowered to purchase and sell grain and cereals of all kinds to buy and sell flour, feed and other food articles. Among the incorporators are Messrs. George Gillson, Mary Gillson and Mary Wright, of Collingwood.

Port Colborne, Ont.—The Maple Leaf Milling Company have made the necessary repairs to their electrical apparatus which was recently put out of business at their local plant and the mill is again running to full capacity.

Toronto.—Fire recently destroyed the feed mill and electric light plant at Tamworth, near Kingston, Ont., owned by Mr. A. B. Carscallen. The damage is estimated at $12,000. There was $5,000 insurance on the plant and contents.

Lethbridge, Alta.—The owners of the Taylor Milling & Elevator Co., Ltd., property here, are still negotiating for the sale of that plant. As previously stated, the original owner is dead and his estate is in liquidation, hence these efforts to sell the mill, which was one of the most successful milling plants in western Canada.

Mr. James Stewart, chairman of the former Canadian Wheat Board and President of the Maple Leaf Milling Company, Ltd., was appointed a director of the Bank of Montreal at the recent annual meeting of the shareholders of that institution.

Messrs. Strauss & Company, grain merchants, London, England, have opened an office in Vancouver with Mr. A. W. Whitmore, formerly with Messrs. C. P. Coles & Company, Ltd., in charge.

The John S. Metcalf Company, Ltd., grain elevator engineers, have been engaged by the Montreal Harbor Board to design the 3,000,000 bushel elevator which is to be erected at the Tarte Pier. The new house will be known as No. 3 elevator.

Mr. R. M. Mahoney, who is at present Alberta manager of the Home Grain Company, Ltd., has been promoted manager of all the houses operated by the company, of which there are seventy in the prairie provinces. Mr. Mahoney, who assumes his new post on January 1, 1923, is a past-president of the Calgary Grain Exchange. His headquarters will be in Winnipeg.

Mr. W. J. Egan, Canadian Trade Commissioner to South Africa, will be in Montreal until December 27. Millers and others interested in the export end of the milling trade may, if they so wish, arrange an interview with Mr. Egan through the secretary of the Canadian Manufacturers' Association, Board of Trade Building.

Mr. B. J. Maguire, the well-known flour and feed dealer of Gorrie, Ont., was a recent business visitor in Toronto.

Mr. T. H. Ellis, grain merchant, of Mount Forest, Ont., was a recent caller on the Toronto grain trade.

Mr. W. J. Baldwin, ex-mayor of Aurora, Ont., and a well-known flour miller of that town, spent some time in Toronto on business recently.

Mr. W. W. Hutchison, vice-president of the Lake of the Woods Milling Co., Ltd., Montreal, was a recent visitor to Toronto.

Mr. Walter M. Hislop, grain broker, Board of Trade Building, Montreal, has returned home, after a two months' vacation to England and the Continent.

Mr. W. R. Clarke, of the Kansas Flour Mills Co., Kansas City, who has just returned from a continental trip and at present is touring Canada, was a recent visitor in Winnipeg.

Mr. A. F. Shuler, of the Huntley Mfg. Co., Ltd., Silver Creek, N.Y., was in Winnipeg recently when he called on old friends in the Grain Exchange, and also met Mr. Will Hill, western representative of his company.

Hon. J. A. Robb, Minister of Trade and Commerce, who has successfully completed preliminary negotiations with the Commonwealth Tariff Board for a reciprocal customs arrangement between Australia and Canada, intends to sail for home very shortly.

The Determination of Ash Content in Flour

By S. J. Lawellen*

(Concluded from page 28, issue of December 1, 1922, of "Canadian Milling & Grain Journal.")

Though it can be seen that the foregoing is quite a general method and applicable to many substances, yet it is listed under, "General Methods, Foods & Feeding Stuffs." The title in itself is quite comprehensive. This same method is applied directly to the determination of ash in beer, canned vegetables, coffees, distilled liquors, flavoring extracts, foods and feeding stuffs, fruits and fruit products, meat and meat products, prepared mustard, spices and other condiments, teas, vinegars, wheat, flour and wines. It is readily seen that the method is intended to cover a multitude of ash tests and is no doubt suitable for the purposes set forth. However, the A. A. C. C. has endeavored to make their official method for ash, as well as all official methods, a short, concise method to be used only on cereals and especially in flouring mill laboratories.

The Calcium Acetate Method

No mention is made by either organization of the so-called calcium acetate method for ash. In fact it is quite generally conceded by both Associations that the arguments in favor of the calcium acetate method are quite futile and that the method itself is of no value in the determination of ash of the common cereals. And still many chemists in flour mill laboratories and commercial laboratories, especially in the Northwest, use this method and have the nerve to insist that it is the only reliable method. We say "nerve" as that is what it would take to insist on this method when the researches of organized associations have shown the method to be antiquated.

Regardless of what method is used it is needless to say that if the same method and same conditions were used by all chemists many of the discrepancies in ash results would disappear. It has been the aim of the A. A. C. C. to get all of its members to use the same standards and official methods in all regular analyses of their products. And we will venture to say that 90% of the members of the A. A. C. C. use its official methods and that where they do not it is through the interference of the miller.

The methods to use, of course, should be the best methods, but one of the main things is to get all the chemists in mills to use the same methods and under like conditions. Were it left alone to the chemists this would be easy, but to make this plan effective we needs must have the co-operation of the millers. The chemists can formulate the best method and best conditions but it is up to the miller to provide the apparatus to get standard conditions and to permit standard methods to be used. Electric muffle furnaces are quite common in mill laboratories but without a pyrometer or high temperature thermometer these furnaces cannot be controlled at the same standard temperature. The low price and advantages gained from the use of a pyrometer make it ridiculous for any mill laboratory to be without this necessary aid to proper ash tests. If the miller will provide the necessary apparatus and give his assent to the using of standard and official methods the chemist will gladly use them and the outcome will be better results, less discrepancy in comparisons, more value and satisfaction to both the miller and chemist.

Value of Ash Test to Miller

The value of the ash test to the miller is in checking the operation of his mill from day to day. Ash uniformity is one of the essentials of a uniform flour and is also useful in judging good clean milling. Trouble in the mill will quickly and surely be shown in variation of the uniformity of daily ash tests. Every change in the mill or milling mixture is likely to be shown in the percentage of ash. Of all these the miller must take cognizance and from the observations in his mill should be able to quickly locate any trouble or variation in any of his machines and especially his rolls. A little experimenting on his system will soon show the miller what changes will quickest show up in the ash determination. He should know what effect the fineness of his breaks and reductions would have on his ash and be able to make deductions accordingly. Even the corrugations on his rolls have a certain influence. In the operation of his bolters, sifters, reels and purifiers the miller can greatly influence his ash. The kind and size of clothing he uses are of material importance. The point of suction, as also the amount, in his dust collecting system should be studied by the miller for its influence on the ash of his products. The ash and color together will show him quicker and more satisfactorily than anything else the nonfunctioning of these vital points in his system. He should be able to forecast the effect on his ash by any change in his wheat mix or milling system. The miller should also be able to take the chemist's result for ash and know where to look for trouble if any has been indicated.

Ash and Quality of Flour

We do not believe that many millers use the percentage of ash as an argument for the quality of their flour. Our experience has been that they use it more as an argument that they are turning out uniform flour and the specific grade called for on any contract. Some may argue that their low ash content is a mark of the quality of their flour but they are the exception and it is a serious mistake. However, many millers do use, and are justified in using, the percentage of ash as an argument that they are doing quality milling, honest milling, and giving the customer the kind of flour for which he contracted. For the miller to talk flour quality from the ash per cent. alone is quite absurd. As far as a sales argument by the miller or as an argument by the salesman there are only two uses for an ash determination, grade or percentage of flour and uniformity. The miller's great use for ash determination are for his own information in the control

* Republished by courtesy of the Journal of the American Association of Cereal Chemists of which Mr. Lawellen, now in charge of the cereal chemistry department of the Milton Hersey Company, Ltd., Paris Building, Winnipeg, is president.

of the mill and here it becomes of great importance. If the miller will do a little experimenting there is no limit to the use to which he can put the ash determination.

The Baker and Ash Determination

The baker is the one who gets the least value from, and makes the most fuss over, an ash determination. It would seem that they have some idea that the percentage of ash has some direct relation to the quality of the flour. Just what this relationship is would be hard to say. It is certain that there is no definite connection between the per cent. of ash and the quality of flour. It is quite true that with wheat of the same kind and class a flour of a certain percentage will somewhat tend to vary in quality as the ash varies. To what extent this can be carried has never been determined but it is believed to be within very narrow limits and to be not alone, caused by ash. Naturally in buying his flour the baker should know the ash content and should use it as an indication of grade only. The per cent. of ash would show no appreciable effect on the quality of the flour or the bread baked therefrom. Knowing the ash content of the flour he specified, the baker has every reason to expect flour that will not vary over 0.02% from that figure, always taking into consideration the difference in moisture content. If he is afraid the miller will ship him a cheaper flour he certainly has the privilege of having his flour analyzed to see if he is getting the grade he purchased. But does he take into account the lowered moisture content occasioned by transportation and storage? If not he is doing the mill an injustice. To condemn a flour on the per cent. of ash alone is an injustice to any flour. The baker should not buy flour on ash content alone nor should he specify a certain percentage of ash.

Summing it all up we would say that the miller's main use of ash is in the operation and control of his mill, to assist in making his mill mix, and as an indication of the quality and uniformity of his milling. He is undoubtedly the one who gets the most value out of the ash determination.

The baker makes use of the percentage of ash as an indication of the grade of the flour. He may also use it to check flour shipments and see that he is getting the grade he purchased. To purchase the flour on ash content alone is certainly a poor business system.

Importance of Ash Determination

The ash test is of importance but not in determining flour quality or value. Its greatest importance, outside of mill control, is when supplemented by a complete chemical analyses and to fail to make allowance for variation of conditions of determining ash and variations of moisture content is to fail to be fair.

GRAIN CASE APPEAL FILED

Washington.—The appeal by the Chicago Board of Trade from the recent decision of Judge Carpenter at Chicago in the grain futures trading act case has been filed in the Supreme Court. Mr. Henry S. Robbins, counsel for the Board of Trade, says that in the near future he will ask the court to advance the hearing of the case, and will also ask it to grant a permanent stay restraining the operation of the law pending final decision.

Late Despatches from Leading Grain Centers

HUGE U. S. WHEAT SALES AGENCY FORMED

Minneapolis.—The largest co-operative wheat sales agency in the world, which, according to its organizers, will handle 100,000,000 bushels in its first year, was formed here recently at a meeting of six co-operative organizations representing ten states.

The new organization is known as the American Wheat Growers' Association, and was formed at a meeting of trustees of the Northwest Wheat Growers, Associated, representing five other states, and the trustees of five other co-operative bodies representing five other states. Headquarters of the new association probably will be located in either Minneapolis or Kansas City, it was said.

C.P.R.'S WHEAT HANDLING RECORD

Winnipeg.—Exceeding by 8,000,000 bushels the total of all grains marketed in districts served by the Canadian Pacific Railway during the first three months of the crop season of the bumper year 1915, the aggregate for the corresponding period of the present season has amounted to 154,317,605 bushels, it has been announced at the local offices of the company. This total is composed of 133,725,337 bushels of wheat and 20,592,268 bushels of coarse grains, while the 1915 figures of 146,045,000 bushels comprised 122,247,000 bushels of the premier grain and 23,798,000 bushels of others. Comparison with 1921, shows a total of 93,090,355 bushels having left the hands of farmers during the time in question, consisting of 81,982,255 bushels wheat and 11,108,080 bushels of coarse grains.

EMBARGO ON WHEAT AT CALGARY

Calgary—There has been practically an embargo on all wheat coming to Calgary owing to the Government elevator here being full, and a considerable amount of congestion at the Pacific coast. For these reasons but little wheat is heading this way, the bulk of the present movement going east.

How long the present state of conditions will exist in connection with Vancouver, local grain men are not prepared to say, but it is expected the strictest regulations will prevail for some time to come. It was ascertained on the Grain Exchange recently that three and three-quarter million bushels of wheat, representing 101,000 tons, had been booked at Vancouver for November shipment, but that only about two and a quarter million bushels, or between 60,000 and 70,000 tons, actually went forward.

It is understood that the harbor board authorities and others at the coast are thoroughly alive to the inadequate handling facilities there, and that bonds have now been floated for the erection of another large elevator. There would appear to be a possibility that this would be erected in time to handle next year's shipments.

THE PRACTICAL MILLER

TEMPERING AND CONDITIONING OF WHEAT MOST IMPORTANT OPERATIONS IN MILLING OF HIGH GRADE FLOUR

A very successful miller—an expert in fact—recently made the assertion that the tempering and conditioning of wheat was of more importance than all of the milling operations that follow. There is no mill, however simple, or however elaborate, but will produce better flour and cleaner offal from what that is properly tempered,—wheat that contains the right amount of moisture, and that has a temperature suited to its cloth, and properly related to the temperature and humidity of the atmosphere. It follows that the less elaborate the milling system the more important the tempering, but, its importance in any system cannot easily be overestimated. It seems better, then, to consider some things that may seem trivial, rather than to neglect anything that might prove of value.

In recent tests when wheat berries were immersed in red ink, and the surplus ink allowed to drain off, the bran immediately assumed a bright red hue, but the color was not uniformly distributed. The beard end was much the higher colored. After 30 minutes of tempering at a temperature of 120 degrees F., the bran was red all through, and very wet. The germ appeared very soft,—almost like jelly, but the flour material just next to the bran was not only free from color, but, apparently free may have been effected slightly, close to the bran, from added moisture. Some of the softer grains but the darker ones were as hard as ever.

At the end of two hours all the surface liquid had disappeared, and the endosperm of both the yellow and dark grains seemed very moist close under the bran-coat. All the interiors were brittle. No portion of the endosperm was colored, nor was the germ, which by this time seemed about as wet as it could get. At the end of 24 hours the bran and germ seemed a little drier, though the germ was still very soft. The remotest part of the endosperm had received considerable moisture, but it was entirely free from any color.

Bran and Germ Dried Fast

Upon exposure to the air for only a few minutes the bran and germ dried very fast. But after one hour of exposure, and the loss of 9 per cent of moisture from the heat, the bran was not dry; and the germ, though it had again acquired a comparatively solid state, was not shrunken or brittle. While the bran had evidently given up much moisture to the air, it must have re-absorbed some from the endosperm.

This might lead to the conclusion that, unless a great deal of water is used, and a very considerable period of time employed, a uniform distribution of moisture throughout the berry can only be accomplished by applying some water that is required for the middlings, with a view of giving the innermost flour material a chance to absorb what it needs, and then allowing some of the moisture to evaporate from the bran, with the purpose of causing it to take up some of the moisture of the outer portion of the endosperm. It seems logical that at a certain stage of drying, the outer portion of the flour material will reach a degree of moisture content identical with that of the innermost part.

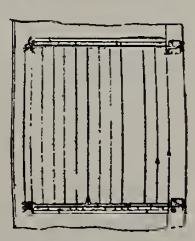
Perhaps the bran may become somewhat drier than any part of the endosperm,—drier than is desirable for milling purposes. If it does, a little water may be added to the wheat a very short time before it goes to the rolls. It should be remembered, however, that the germ very quickly becomes wet when water is applied to the surface of the wheat, and care should be taken that it does not get too soft and sticky for milling.

Loss of Moisture

There is no doubt that wheat will lose moisture upon standing wet for long periods of time, even if it is in a closed bin. Possibly it would not if the bin were absolutely air-tight, but even that is doubtful. The air surrounding the berries might be able to retain considerable moisture, which would be dissipated when the wheat was finally exposed. It might be that the wheat generates some heat, and that part of the oxygen of the water is combined with carbon, passing off as carbon dioxide. Whatever the cause, wheat that was tempered for 48 hours, with a moisture content of 16% at a temperature of 110 degree F., lost a full 1½ per cent even though it was shut up in a tin can with a snug-fitting lid. Wheat tempered with water at 70 degrees F. and left in the same sort of can, in a temperature of from 65 degrees to 70 degrees, lost 9 per cent in 48 hours. However, at the end of 18 hours neither of the samples had lost any moisture, whatever.

Milling and Grain Patents

Mr. Carl H. Licht, Rushmore, Minn., is the inventor of a new grain door, sketch of which is shown. The door is mounted in the opening of a car and has a pair of members secured to the car body at points below the opening and adjacent to its ends, the members having slots T-shaped in cross section, a pair of normally bowed spring rods having T-shaped lower ends engaging said slots for detachably con-



necting the rods to the members, the upper ends of the rods having forks, bolts projecting outwardly from the car body at points above the door opening and adjacent to its ends and which are straddled by the forks, washers upon the bolts, and means on the bolts for holding the forked ends in place.

THE PRACTICAL MILLER

ATMOSPHERIC HUMIDITY AND ITS EFFECT ON OPERATIONS OF THE MILL

Although the average miller is more concerned about the influence humidity has on the mill operation and the quality of products and about practical methods of control, nevertheless to fully understand these two latter phases of the subject, a thorough understanding of what is meant by the term humidity is necessary.

Humidity is defined in the dictionary as moisture or dampness, and with reference to air, means the amount of vaporized moisture contained in it. The amount of water vapor which can be mixed with a given quantity of air varies with its temperature; the higher the temperature, the greater the amount of water vapor it can hold. When air at a given temperature contains all the moisture possible for it to hold, it is said to be saturated.

Absolute and Relative Humidity

The quantity or degree of the humidity of the atmosphere is expressed in two different ways, as absolute humidity and as relative humidity. Absolute humidity has reference to the actual weight of water vapor contained in a unit quantity of air. Relative humidity, which is of greater importance, is the percentage or ratio of the actual amount of water vapor present in the air as compared with the greatest amount the air could possibly contain at a given temperature. Relative humidity is usually stated in terms of percentage.

The capacity of the air for water vapor increases proportionately with temperature, therefore every increase in temperature, assuming that the quantity of water vapor in the air remains the same, results in a lowering of the relative humidity, and every decrease in temperature results in a proportionate increase of relative humidity until the saturation point is reached, beyond which condensation occurs.

The relative humidity of the outdoor atmosphere in ordinary seasons ranges from about 35 per cent in dry weather to about 40 per cent in stormy weather. The relative humidity, however, of the atmosphere within heated buildings during cold weather is often much lower than 35 per cent. The reason for the lower relative humidity indoors is very obvious when it is understood that in the heating of buildings cold air is usually brought in from outdoors and its temperature raised without supplying additional moisture to it. This results in a proportionate lowering of its relative humidity, and, if it so happens that the latter is near the lower extreme of relative humidity for outdoor atmospheric conditions the relative humidity of the indoor air may be abnormally low.

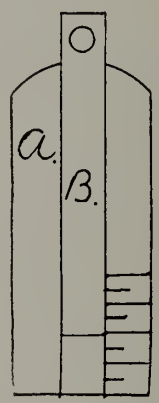
Effect of Atmospheric Conditions

Millers have for a long time recognized the fact that atmospheric conditions have an effect on mill operation and indirectly on the quality of the products. In dry weather the various mill stocks grind and bolt differently than in wet weather. These differences necessitate changes in the operation of the mill, and since the weather conditions as regards temperature and relative humidity are constantly changing, the miller must keep close watch on the operation of his mill and the quality of his products, so that he may vary his tempering and the manner of his grinding and bolting to produce efficient results.

REGULATING FLOW TO SEPARATOR

All millers do more or less blending of the wheat they grind. They attempt to mix certain percentages of the different wheats they have, and what is more, they have got to feed their milling separator with an even feed or the tempering will not be right —even.

The old-fashioned wide slide which is, say, 4 inches wide, is drawn up about a half inch and the first straw or wheat head, or anything coarse which comes along, stops the flow of wheat, and trouble ensues.



To get out of this trouble cut a groove in the wide slide, say 2 inches wide. This narrow slide has bevel edges and works within the wide slide. A shows the wide slide, and B the narrow slide. Marks across one side of the wide slide will act as a guide in placing the slide "always the same."

It will be seen that this style of slide is safe as far as getting an even flow of wheat, regardless of straws and small trash. Use this style slide once and it will always be used.

Cereal Chemistry Department

PRACTICAL millers everywhere are cordially invited to make free use of the recently inaugurated Cereal Chemistry Department of "Canadian Milling & Grain Journal. All questions received from millers on any phase of cereal chemistry will be answered herein by Mr. S. J. Lawellen, president, and other members of the American Association of Cereal Chemists. Mr. Lawellen's position as head of the cereal department of the Milton Hersey Company, Limited, Paris, Building, Winnipeg, Man., and his acquaintance with chemists in the Dominion, places him in an excellent position to handle these questions. Both questions and answers will be published in this column, and while no names will be given, all communications must be signed.

THE PRACTICAL MILLER

BREAKING, AND ITS EFFECTS ON SUBSEQUENT MILLING OPERATIONS

(By James Melvin*)

There must be a number of practical millers in the Dominion, who while undoubtedly turning out a satisfactory brand of product are perpetually striving by thoroughly understanding the details of every operation thereof to improve their methods of manufacture.

The subject of breaking is a wide one and one that is of paramount importance for, if the breaking operations are poor and indifferent it naturally follows that the resultant flour will also be poor and of indifferent quality.

My practical experience has been that wheat going to first break rolls should contain about 14 to 15 per cent of moisture, obtained by the application of warm water and spraying through a period of 20 hours in the tempering bin. The temperature of the heat should run as high as 90 degrees Fahrenheit, this allowing the middlings to mellow down very easily.

In the reduction to flour of the wheat tempered as above I have found that the best results have been obtained on 9 x 24 rolls, fast running 500, and the slow 200 r.p.m. I may say that I am very particular regarding corrugations in this break and am at present using with excellent results 12 corrugations on fast with 18 degrees pitch of tooth and 5-8 spiral. On the slow rolls my corrugations number 16 with 17 degrees pitch of tooth and 5-8 spiral. This depth of pitch allows a pocket for the middlings, whereas, a more shallow depth would not provide for this. I make 30 per cent reduction on this break with 3% B flour. The first break runs dull to dull.

My second break consists of a 9 x 24 roll, 500 r.p.m. for fast and 200 for slow. Dawson corrugations cut No. 1, 16 corrugations per inch on both rolls. Fast roll spiral 1-2 inch per foot, slow roll spiral just sufficient to allow clearance required for corrugating. Rolls run dull to dull making a 40% reduction and 5% B flour.

My third break 9 x 24 rolls saw tooth corrugations. Fast running 500 r.p.m., slow 200 r.p.m. Corrugations twenty cuts per inch on both rolls. Fast roll spiral 1-4 inch per foot. Slow 1-8 per foot. Reduction 15% and 5% B flour.

On the bran roll 9 x 24 fast roll runs 500 r.p.m., slow roll 200 r.p.m. Spiral on both rolls 1-2 inch per foot. Rolls run sharp to sharp making a 5% reduction.

As I have intimated before, the foundation of all good milling is good breaks, for this governs the ash as well as gluten content and volume as well as texture. Indeed, everything pertaining to the making of pure quality commercial flour depends upon it.

I maintain that proper tempering and breaking does chemically change glutenin or gliadin or the protein as contained in the natural wheat berry. It is not the proteins that count in making a good flour and consequently good bread, but the velvety gluten which gives bread its texture, color and palatability.

*Radisson Milling Company, Radisson, Sask.

USE OF MAGNETS IN THE MILL

The magnets in a mill are a mighty good preventive against explosion, and yet they are considered of small importance in many mills.

They should be placed ahead of the scourers having steel cases; ahead of feed rolls, attrition mills, first break rolls, etc., for the reason that there is always a cloud of dust under a roll, and any piece of metal passing a roll is liable to spark, ignite the dust and blow up the mill, or cause a fire that will destroy it.

Again, iron of any kind will damage the corrugations, and often will break a weak part in a roll frame, and shatter attrition mill plates.

Precaution is worth much in regard to safeguarding of grinding mills of all kinds by placing magnets where they ought to be.

BAD FLOUR OR WATER?

Flour occasionally has to stand the blame for poor bread making results when the trouble belongs elsewhere. The tendency to blame flour is because it is the largest and most costly ingredient in bread. But water is the second largest ingredient and the least costly, and without doubt is occasionally responsible for unsatisfactory results. A case recently occurred in an Australian town. The bread became dark and had a distinctly disagreeable taste. The bakers blamed the flour; but investigation showed that the town's water supply was at fault. It seems that when the supply of water in the reservoir was replenished, the trouble ceased. Soft water is usually better for bread making than hard water, though there are many kinds of "hardness" in water. Some yield to boiling or the adding of a softening reagent, like soda. But there are hard waters that retard fermentation in the dough. Even so, such water is often better than water from cisterns that are dirty and contaminated.—American Miller.

TAMPER FOR HAND PACKING

A first-rate tamper for packing barrels by hand can be made out of a piece of lumber, 2 x 8 beveled

to a point, with a convenient hand-hole in the thick end and about 8 inches longer than the barrel. In small mills not equipped with a barrel packer such a tamper will be found most useful.

THE PRACTICAL MILLER

CLASSIFIED ADS

The rate for advertising in this column is two cents a word with a minimum charge of 50 cents. An additional charge of 10 cents will be made for replies addressed to this office.

HEAD MILLER WANTED.—A two hundred barrel mill in Ontario is open to engage the services of a first-class head miller; must be thoroughly reliable and able to get yield and uniformity; no other need apply. Will pay good wages to the right man. Reply Box 131, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal

POSITION WANTED by flour salesman in the Province of Quebec. Excellent connections in Quebec city and district. Has had several years experience, and has represented a number of leading firms. Can furnish best references. Reply Box 130, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

FOR SALE—New copy of C. E. Oliver's "Miller and Milling Engineer." A leading text-book for the trade. Over 350 pages of everything pertaining to the installation of milling machinery and the manufacture of flour. For particulars as to price, reply Editor, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal.

FOR SALE—Fifty-barrel Midget Marvel Mill with cleaner, elevator heads and boots, belt and buckets, chopper and other mill equipment. All in good condition. Price very reasonable and on terms if desired. Reply Box 132, "Canadian Milling & Grain Journal," Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED—Position as Head Miller. Applicant has had twenty-five years' experience operating mills from 50 to 400 barrels capacity. Can furnish first class references. Reply, Advertiser, 222 Wychwood Avenue, Toronto, Ont.

MILL TO RENT — Constructed of brick, 45 by 90; also warehouse with holding capacity of three to four thousand bags of flour; storage bins; four double rolls, and full complement of machinery, in good condition. Situated on C. P. R. and G. T. R. Reply Box 129, "Canadian Milling & Grain Journal", Dubrule Building, Phillips Square, Montreal, P.Q.

WANTED a reliable flour and feed dealer to furnish wheat for milling. Flour and feed from wheat supplied to be taken by dealer on commission basis. Reply Arcola Mills, Arcola, Sask.

AGENTS WANTED to handle a high class Crude Oil Engine, suitable for Mills and Elevators. For full particulars write H. W., c/o "Canadian Milling & Grain Journal," Dubrule Building, Montreal.

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— CEREALS —
PRODUCE & FEED

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STOLP & COMPANY
FLOUR & GRAIN IMPORTERS

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THE PRACTICAL MILLER

The Question Box

With a view to making this department one of real service, "Canadian Milling & Grain Journal" cordially invites its readers to send in their problems to The Question Box. There are but very few millers or elevator operators who do not have worries in the proper conduct of their plants. It may be due to lack of experience or inability to trace cause and effect. The logical and sensible thing to do is to ask someone who may possibly know. Often he is not at hand, and still oftener the perplexed miller or elevator operator does not want to show his lack of knowledge. Under these circumstances he can address his inquiry to the craft through this journal. His name will not be divulged if he wishes to remain incognito. Someone is sure to reply who has had similar problems to meet or similar questions to ask. We guarantee to devote all the space necessary to the asking and answering of questions, so do not be backward in sending them in.

THE EDITOR.

QUESTION.—What is the proper line of cleaners for a 100 bbl. mill?

ANSWER.—Receiving Separator, Milling Separator, one single Scourer with Shoe, one double Scourer with Shoe, one Brush Machine which should be placed upright.

QUESTION.—What should be the speed and capacity of each?

ANSWER.—Receiving Separator ought to be at least 75 bushel per hour capacity, 450 to 550 R.P.M. Milling Separator, 35 bu. capacity, 500 RPM, Side Shake. Single Scourer, 25 bu. capacity, 750 RPM. Double Scourer, 25 bu. capacity, 750 RPM. Brush Machine, 25-30 bu. capacity, 600 RPM. One good Disc Oat Separator for wheat and it will eliminate every vistage of extraneous matter. Ought to be at least 50 bu. capacity, 100 RPM.

QUESTION.—How should the screenings and dust from each cleaner be disposed of?

ANSWER.—All dust and screenings should be delivered to a round reel or any good grading machine and grade them and then could dispose of them as best meet requirements, which are not alike in all situations.

CORRECTS A MISAPPREHENSION

Ottawa — American vessels loading grain at Canadian ports under the suspension of the coasting laws announced by the Government recently, are "permitted to load grain on their last trip and carry same to an Eastern Canadian port on condition that such grain shall be unloaded at such Canadian port after the close of navigation," according to instructions to port authorities issued by the Department of Trade and Commerce. Announcement to this effect was made recently, it being stated also that a misapprehension has arisen as to the rights of such vessels to unload their cargoes after navigation had ceased. The official interpretation is that such vessels may unload any time after the close of navigation.

The Duster

The Crown Attorney of an Ontario county has announced that he will start an investigation into a party held in a local hall by a sporting association recently, at which nude dancers are said to have furnished the entertainment.

In other words, he's after the bare facts.

TO-DAY'S BEST STORY

A girl went to a dinner with her steady. The young man noticed a speck of what appeared to be lint on her shoulder. When she wasn't looking he attempted to knock it off with his finger. After several attemps he took hold of the fleecy stuff and when he seemed to have all of it threw the wad under the table. That night the girl told her mother that she had a perfectly lovely time. "But," she added, "I have been lying here in bed, mother, wondering what has become of my union suit."

It seems after we have been looking over a pile of old receipts that the months with an X in them are about the only ones in which we do not have to pay a tax bill of some kind or other.

Rufus Redd Dogg

"TH' wimmen shore hev long mem'ries an' a marvellous ability f'r gettin' outside av' th' real meanin' 'f wurrds," observed Rufus Redd Dogg, owner and proprietor of the Redd Dogg Flour & Feed Mills of Squaw Creek, as he took his seat beside Minty Rogers behind the stove in the corner grocery store.

"Yes, sirree," he continued, "I feels th' other day, th' urge 'f th' festive season as et were an' I sez, sez I t' 'Tilda ez she wuz whackin' up a mess 'f mincemeat thet every wan 'round Squaw Crick seemed t' be inbood with th' Christmas sperit 'n thet I hoped she wuz feelin' th' same."

She ups an' looks et me all brislin' like a grain growler when he sees a member 'f th' Winnipeg Grain Exchange an' she sez t' me sez she: "Rufus Redd Dogg, ef ets th' kind 'f Christmas sperit y'r talkin' 'f thet ye got fr'm thet no-good Wilt Henroot las' Christmas, thet ye poored over th' plum puddin' an' thet near blew th' walls out an' th' roof in an' sent th' puddin' t' Kingdom Cum, ye kin hev y'r Christmas sperit all t' yer' sel' out 'n th' yard where th' animiles don't mind th' noise. I likes a roof over me head all th' year round not f'r only 'leven months like las' year. Me face ain't never been th' same an' all 'f y'r whiskers ain't growed back yet, so I don't want none 'f thet kind 'f Christmas sperit roun' here."

"An' then they sez thet marridges ez made 'n Heav'n," concluded Rufus sadly.

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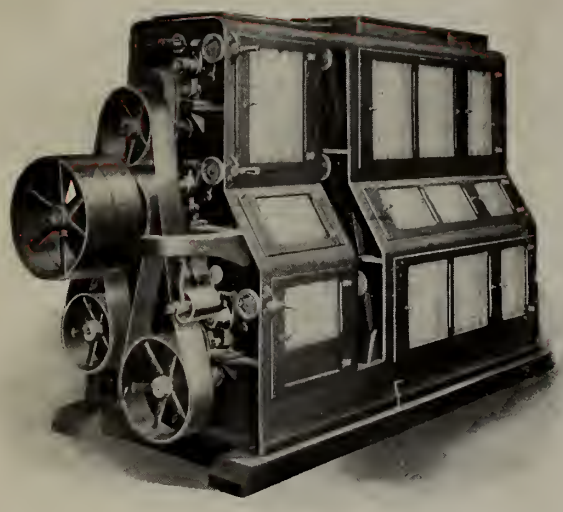

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